

PERSONALITY AND JOB SATISFACTION: AN INVESTIGATION
OF CENTRAL WISCONSIN FIREFIGHTERS

Interactions Between Personality and Various Factors at a
Local Fire Department

By

Jennifer S. Skibba

A Research Paper

Submitted in Partial Fulfillment of the
Requirements for the
Master of Science Degree
With a Major in

Applied Psychology

Approved: 4 Semester Credits

Dr. James Tan, Investigation Advisor

The Graduate College
University of Wisconsin-Stout
May, 2002

**The Graduate School
University of Wisconsin-Stout
Menomonie, WI 54751**

Abstract

	Skibba	Jennifer	S.
(Writer)	(Last Name)	(First)	(Initial)

Personality and Job Satisfaction: An Investigation of

(Title)

Central Wisconsin Firefighters

Applied Psychology	Dr. James Tan	May, 2002	108
(Graduate Major)	(Research Advisor)	(Month/Year)	(No.of Pages)

American Psychological Association (APA) Publication Manual 4th Edition

(Name of Style Manual Used in this Study)

The purpose of the present investigation is to evaluate how personality and job satisfaction affect job performance in employees at a Central Wisconsin fire department. Through a process of conducting assessments and gaining access to performance evaluations completed at the department, interactions between the variables was seen. The main effects found were that Factor C (Emotional Stability) and Factor F (Liveliness) of Cattell's 16 PF had positive correlations with job performance, while Factor H (Social Boldness) had a negative relationship with job performance. The global factor of Realistic on the 16PF also has a positive correlation, as did Self-Esteem and Leadership Potential. Social Sensitivity had a negative correlation. The Positive

Affect scale of the Positive and Negative Affectivity Scale also had a positive correlation with job performance. Other significant relationships between the variables were found, including scores on the Job Descriptive Index with Factor E (Dominance). Differences between groups, according to job tenure, were not found. The main objective of finding relationships between the personality and job performance was conclusive, as some of the variables did relate to job performance. Job satisfaction was also taken into consideration and there were also variables that correlated with personality.

Table of Contents

Chapter 1

Introduction	1
--------------------	---

Chapter 2

Review of Relevant Literature

Job Performance in Relation to Job Satisfaction	2
Job Performance and Job Satisfaction in Relation to Personality Type	3
Cattell's 16 Personality Factors (16PF)	5
Job Descriptive Index (JDI)	8
Balanced Inventory of Desirable Responding (BIDR)	10
Positive and Negative Affectivity Scale (PANAS)	11

Chapter 3

Review of Literature Relevant to Firefighters

Motivation	12
Job Satisfaction	12
Purpose of Present Investigation	14

Chapter 4

Explanation of Assessments Used

Cattell's 16 Personality Factors (16PF)	15
Warmth (A)	15
Reasoning (B)	16
Emotional Stability (C)	16
Dominance (E)	17

Liveliness (F)	17
Rule-Consciousness (G)	18
Social Boldness (H).....	18
Sensitivity (I)	18
Vigilance (L)	19
Abstractedness (M)	19
Privateness (N)	20
Apprehension (O)	20
Openness to Change (Q1)	20
Self-Reliance (Q2)	21
Perfectionism (Q3)	21
Tension (Q4)	22
Extraversion (EX)	22
Anxiety (AX)	23
Tough-Mindedness (TM)	23
Independence (IN)	24
Self-Control (SC)	24
Job Descriptive Index (JDI)	24
Work on Present Job	25
Present Pay	25
Opportunities for Promotion	25
Supervision	26
People on Your Present Job (Co-workers)	26

Job in General (JIG)	26
Balanced Inventory of Desirable Responding (BIDR).....	26
Positive and Negative Affectivity Scale (PANAS)	27
Current Department Performance Evaluation	27

Chapter 5

Selected Fire Department

General Overview	29
Employees.....	29
Job Description.....	29

Chapter 6

Methodology

Participants	31
Materials.....	31
Procedure	31
Data Analysis	32

Chapter 7

Results

Cattell's 16 Personality Factors (16PF)	33
Warmth (A)	33
Reasoning (B)	34
Emotional Stability (C)	34
Dominance (E)	34
Liveliness (F)	34

Rule-Consciousness (G)	34
Social Boldness (H)	35
Sensitivity (I)	35
Vigilance (L)	35
Abstractedness (M)	35
Privateness (N)	35
Apprehension (O)	36
Openness to Change (Q1)	36
Self-Reliance (Q2)	36
Perfectionism (Q3)	36
Tension (Q4)	36
Extraversion (EX)	36
Anxiety (AX)	37
Tough-Mindedness (TM)	37
Independence (IN)	37
Self-Control (SC)	37
Job Descriptive Index (JDI)	37
Work on Present Job	38
Present Pay	38
Opportunities for Promotion	38
Supervision	38
People on Your Present Job (Co-workers)	39

Job in General (JIG)	39
Overall Satisfaction.....	39
Balanced Inventory of Desirable Responding (BIDR)	39
Positive and Negative Affectivity Scale (PANAS)	39
Current Department Performance Evaluation	40
Overall Findings - Correlations.....	41
Job Descriptive Index	41
Job in General	42
Job Tenure	42
Job Performance	42

Chapter 8

Discussion	43
Conclusion	45
References	46

Appendix

Appendix A: Participant's Informed Consent Form	51
Appendix B: Participant's Instructions for Assessments	53
Appendix C: Balanced Inventory of Desirable Responding	56
Appendix D: Positive and Negative Affectivity Scale	58

Tables and Figures

Tables

Table 1.1: Descriptives Table – Cattell’s 16 Personality Factors	59
Tables 1.2 –1.22 – Cattell’s 16 Personality Factors Frequency.....	62-86
Table 2.1: Descriptives Table – Job Descriptive Index with the JIG	88
Tables 2.2 –2.7 Job Descriptive Index Facet Frequency	89-94
Table 3.1: Descriptives Table – Balanced Inventory of Desirable Responding	95
Table 3.2: Descriptives Table: BIDR Scales	97
Table 4.1: Descriptives Table – Positive and Negative Affectivity Scale	98
Table 4.2: Descriptives Table – PA and NA Scales	100
Table 5.1: Descriptives Table – Current Performance Evaluation	101
Table 6.1: Correlation Table – Personality, Satisfaction, and Performance	103

Figures

Figure Captions	104
Figure 1: Bar Chart – Means of Cattell’s 16 Personality Factors – Primary.....	105
Figure 2: Bar Chart – Means of Cattell’s 16 Personality Factors - Global.....	106
Figure 3: Bar Chart – Means of Job Descriptive Index with Job in General	107
Figure 4: Bar Chart – Means of Current Performance Evaluation	108

Chapter 1

Personality and Job Satisfaction: An Investigation of Central Wisconsin Firefighters

The purpose of the present investigation is to evaluate how personality and job satisfaction affect job performance in employees at a Central Wisconsin fire department. Through a process of conducting assessments and gaining access to performance evaluations completed at the department, interactions between the variables was seen. The main objective was to see if there was any relationship between job performance, personality, and job satisfaction, as well as to assess the overall satisfaction of the department. The research on these constructs was assessed by using various instruments: Cattell's 16 Personality Factors (16PF) for the personality construct, the Job Descriptive Index (JDI) with the Job in General (JIG) for the job satisfaction construct, and the most recent performance evaluations conducted at the selected fire department for the job performance construct. Other measures, the Balanced Inventory of Desirable Responses (BIDR) and the Positive and Negative Affectivity Scale (PANAS) were used as validation for the study.

Chapter 2

Review of Relevant Literature

Job Performance in Relation to Job Satisfaction

In the field of Industrial/Organizational psychology, one of the most researched areas is the relationship between job satisfaction and job performance (Judge, Thoresen, Bono, & Patton, 2001). Landy (1989) described this relationship as the “Holy Grail” of Industrial psychology. Research linking job performance with satisfaction and other attitudes has been studied since at least 1939, with the Hawthorne studies (Roethlisberger & Dickson, 1939). In Judge et al. (2001), it was found by Brayfield and Crockett (1955) that there is only a minimal relationship between job performance and job satisfaction. However, since 1955, Judge et al. (2001) cited that there are other studies by Locke (1970), Schwab & Cummings (1970), and Vroom (1964) that have shown that there is at least some relationship between those variables. Iaffaldano and Muchinsky (1985) did an extensive analysis on the relationship between job performance and job satisfaction. Across their many studies, they found a mean correlation of .17 (Iaffaldano & Muchinsky, 1985). There are also stronger relationships depending on specific circumstances such as mood and employee level within the company (Morrison, 1997). Organ (1988) also found that the job performance and job satisfaction relationship follows the social exchange theory; employees’ performance is giving back to the organization from which they get their satisfaction.

Judge et al. (2001) argued that there are seven different models that can be used to describe the job satisfaction and job performance relationship. Some of these models view the relationship between job satisfaction and job performance to be unidirectional, that either job satisfaction causes job performance or vice versa. Another model states that the relationship is a

reciprocal one; this has been supported by the research of Wanous (1974). The underlying theory of this reciprocal model is that if the satisfaction is extrinsic, then satisfaction leads to performance, but if the satisfaction is intrinsic, then the performance leads to satisfaction. Other models suggest there is either an outside factor that causes a seemingly relationship between the factors or that there is no relationship at all, however, neither of these models have much research.

The final model is “Alternative Conceptualizations of Job Satisfaction and/or Job Performance.” This model discusses how positive attitudes toward one’s job can predict a high degree of job performance. George and Brief (1996) and Isen and Baron (1991) both found that employees’ attitudes are reflected in their job performance. If this is the case, then we can argue that there is a relationship between employees’ job satisfaction and job performance, as satisfaction is an attitude about their job. Industrial psychologists do not justify any relationship between job satisfaction and job performance, although it has been found that a positive mood is related to higher levels of job performance and job satisfaction.

Job Performance and Job Satisfaction in Relation to Personality Type

As stated above, job satisfaction in relation to many factors is one of the most researched areas of worker attitudes. However, there are other factors to consider when looking at what makes an employee do well on the job.

One construct that has been used to predict job performance is personality. This is one area that is criticized by many people as something that may not be valid to use (Rothstein & Goffin, 2000). Despite these criticisms, most researchers feel that studying the relationship between personality and job performance is extremely useful (Goffin, Rothstein, & Johnston, 2000).

Scheider and Dachler (1978) found that, over time, satisfaction with a job remains unusually stable, which made them believe that it was people's personality that was due to the satisfaction with their job, rather than other variables. Most studies dealing with job satisfaction in relation to personality are conducted in large organizations, however, very few have been done to view the impact on smaller organizations (Morrison, 1997). There are many different personality factors that have been correlated to job satisfaction, but overall, there seem to be two traits that have significant correlations: locus of control and negative affectivity (Spector, 1997).

Locus of control refers to people's beliefs about how much control they have over their job, life, or various other factors (Rotter, 1966). Locus of control has been correlated with job performance as well as job satisfaction (Spector, 1997).

Negative affectivity is people's tendency to have negative emotions, independent of the situation (Watson, Clark, & Tellegen, 1988). This is correlated to job dissatisfaction because if people feel negative overall, they will be negative about their job as well (Spector, 1997).

According to Buss (1992), the Big Five factors (which for this study are Cattell's five Global factors of: extraversion, anxiety, tough-mindedness, independence, and self-control) have some influence on job performance. The original "big five" personality factors are emotional stability, extraversion, intellect/openness, agreeableness, and conscientiousness (Acton, 2002). Acton (2002) compared the "big five" to Cattell's global factors. He found that extraversion is the same in both, tough-mindedness was the "big five" version of agreeableness, anxiety was the version of emotional stability, independence was the version of openness to experience, and self-control the version of conscientiousness.

It seems to be a common assumption that employees who are happy with their job, should also be more productive at work (Spector, 1997). It has been hypothesized that if above average

performance is rewarded on the job, then the correlation between job satisfaction and job performance would be higher (Jacobs & Solomon, 1977).

There has been recent research that has shown relationships between personality and job performance in firefighters (Liao, Arvey, & Butler, 2001). Specifically, the study by Liao et al. (2001), found that the MMPI trait of social introversion was significantly negatively correlated to injury frequency ($r = -.08$). The reason stated for underlying this finding is that introverts tend to be less social and because firefighters need to work as a team, introverts may be less likely to ask for help when needed. This, in turn, also creates more hazards on the job, and subsequently, more job-related injuries.

Abraham (2000), reviewed personality on the basis of cynicism towards an organization. It was found that personality cynicism was the best predictor of job satisfaction, because it explains 57% of the variance in job satisfaction, $t(53) = -8.54$, $p < .01$.

Cattell's 16 Personality Factors (16PF)

Cattell's 16PF is a personality assessment instrument that has shown reliability in test-retest situations, as well as having internal consistency. The 16PF has been shown to be stable on both primary factors (test-retest correlations ranged from .69 to .86) and global factors (test-retest correlations ranged from .70 to .91). It has also been shown to be internally consistent with split-half reliabilities ranging from .68 to .87.

The 16PF has also been shown to have construct and criterion validity. Research indicated in Russell and Karol's (2002) manual for the 16PF found that the assessment does test 16 different personality factors and is predictive of various criterion scores of creative potential and self-esteem.

Cattell's 16PF was chosen for this study because it has previously been used for other studies correlating job performance and/or satisfaction with personality (Baute, 2000; Goffin et al., 2000; Lunenberg, 1992; Schuerger & Ekeberg, 1994).

Goffin et al. (2000) cited that previous research has shown that personality as measured by the 16PF is related to job performance. Goffin et al. found that both extroversion ($r = .32$) and dominance ($r = .25$) were correlated with job performance. Lunenberg (1992) also used the 16PF in his study and found that the factors of dominance, imagination, self-sufficiency, and warmth were related to above-average performance. Schuerger and Ekeberg (1994) found similar results in their study, in comparing the five global personality traits with performance, they found correlations between performance and extraversion ($r = -.33$), anxiety ($r = .33$), tough-mindedness ($r = .07$), independence ($r = -.19$), and self-control ($r = -.06$). The results gained from these correlations were not overwhelming, however, they were significant.

Research with the 16PF has also been previously conducted on firefighters, to help in employee selection and decide who will have the best overall job performance (Baute, 2000). In his research, Baute (2000) used three different assessments, one being the 16PF, and found that it was predictive of above average job performance in firefighters. As stated in his research, the 16PF has been used for over 30 years to help recruiters select personnel. The research was conducted by having the pre-hire scales correlated with later performance on the job. The fire department chose groups of 20 firefighters considered to be low performers and 20 firefighters considered to be high performers. The firefighters were tested with various assessments, including the 16PF and the groups were found to have statistically significant differences on four of the primary scales. Baute (2000) found that the primary factors of emotional stability, utilitarianism, practicality, and traditionalism were related to high performers. Later research also

indicated that less dominant, less skeptical, and less exacting were also seen more with high performers. Correlations for job performance and the factors of the 16 PF are summarized by Baute (2000):

High performers were more tough-minded, resolute, unempathic (.001), more utilitarian, objective, unsentimental (.004), more grounded, practical solution oriented (.01), more emotionally stable, adaptive, mature (.03), more traditional, attached to the familiar (.06), and more accommodating, selfless, agreeable (.07) for a total of six factors.

Because of his work, Baute (2000) recommended the use of the 16PF in pre-screening of applicants for the selected fire department he was researching. The current fire chief of the selected department in Baute's research felt that the research was helpful and valuable to the department; the retired chief also felt that Baute's research was an effective way to assess who would be successful on the job.

Even though the 16PF has shown to be a somewhat successful predictor of job performance in some situations, the assessment is not without fault. Because the 16PF is a personality assessment, and if it is being used as a hiring tool, applicants may want to make themselves come across as having a different personality than their actual one (Christiansen & Goffin, 1994). Because of this "faking good" scenario, the 16PF does have subscales that try to counter for these effects. The Impression Management scale, Infrequency scale, and Acquiescence scale try to control and counter the "faking good" or "faking bad" scenario (Russell & Karol, 2002).

The Impression Management scale is a social desirability scale. The type of scale tries to identify individuals who may answer questions in a more socially acceptable manner (Russell & Karol, 2002). A high score on this scale may represent people who are trying to present

themselves as behaving in the most socially desirable way, while a low score reflects people's accepting of less desirable attributes (Russell & Karol, 2002).

The Infrequency scale measures how participants answer the questions and which responses are marked most frequently. A high score on this scale may be explained by people not being able to decide which choice is more accurate for themselves, that they are trying to avoid "making a wrong impression," or that they did not completely understand the question being asked (Russell & Karol, 2002).

The Acquiescence scale measures the participants' tendency to answer "true" to all true/false questions. This may reflect that no matter what the question being asked is, people that score high on this scale will always answer "true."

Job Descriptive Index (JDI)

The Job Descriptive Index is an instrument that is used to assess job satisfaction more than any other inventory (Kinicki, McKee-Ryan, Schriesheim, & Carson, 2002). Spector (1997) also states that it may also be the "most carefully developed and validated" job satisfaction measure (p. 12). It is designed to measure job satisfaction on the basis of five facets, including an overall job satisfaction facet, the Job in General (JIG) scale (Kinicki et al., 2002). Kinicki et al. (2002) found that the JDI was correlated with performance evaluation scores ($r = .19$).

The Job Descriptive Index manual (Balzer et al., 1997) describes the purpose of the JDI as well as the validity and reliability conducted. The basis for the Job Descriptive Index is that job satisfaction is important for three different reasons: humanitarian concerns, economic concerns, and theoretical concerns.

Humanitarian concerns are of interest because employers want people to be satisfied with their jobs. Job satisfaction has been related to various factors, like physical and mental health, as

well as overall life satisfaction, so it is important for people to be satisfied at work (Balzer et al., 1997).

Economic concerns are of interest to employers because they want to get the most from their employees. If happier employees lead to increased productivity, then it is worth the employers time to make the employees satisfied. Job satisfaction can also lead to various factors like decreased absenteeism, reduced turnover, and fewer on the job injuries (Balzer et al., 1997).

Theoretical concerns are of interest because many people view satisfaction as the cause of work-related behaviors, such as maintaining good working relationships, coming to work, and doing the job well (Balzer et al., 1997).

The facets of the Job Descriptive Index are derived from the definition of job satisfaction put forth by Smith, Kendall, and Hulin (1969). Smith et al. (1969) defined job satisfaction as “feelings or affective responses to facets of the situation” (p. 6). Because of this definition, the JDI viewed satisfaction as the accumulation of five facets: work on present job, present pay, opportunities for promotion, supervision, and people on your present job (co-workers). For each facet, validity and reliability data has been collected.

The validation studies were conducted over a period of five years, beginning in 1959. Because of these studies, which found similar results, conclusions were drawn about the JDI. (Balzer et al., 1997). The JDI measures had high levels of discriminant and convergent validity. Balzer et al. (1997) found evidence for convergent validity when the JDI was found to correlate highly with other measures of job satisfaction, such as the “Faces” scale (Kunan, 1955), and a numerical rating scale (-100 to +100). Smith et al. (1969) that the scoring format of the JDI (Y, ?, or N) was the best scoring procedure.

Internal reliability was conducted on the 1997 version of the JDI with the JIG from over 1600 cases and was found to be high with coefficient alphas of reliability ranging from .86 to .92 (Balzer et al., 1997). Work on present job had a coefficient of .90. Present pay had a coefficient of .86. Opportunities for promotion had a coefficient of .87. Supervision had a coefficient of .91, the co-workers scale had the same coefficient (.91). The Job in General had the highest coefficient of .92 (Balzer et al., 1997).

Balanced Inventory of Desirable Responding (BIDR)

This measure was used because how people answer questions is just as important as the answers they give. When a person takes a personality assessment, they may feel the need to make themselves appear to have a different personality than they have (Helmke, 2000). Paulhus (1998) created the Balanced Inventory of Desirable Responding to try to aid in figuring out when a person may be trying to “fake good” on a personality assessment. The BIDR consists of two scales: impression management and self-deception. The impression management aspect is very similar to that of the 16PF sub-score, it measures how much the participant is purposely trying to be deceptive (Rothstein & Goffin, 2000). The self-deception scale measures denial within people on how they may truly behave (Helmke, 2000). The impression management scale is thought to be more indicative of faking because the participant is aware of the responses being given, whereas, the self-deception scale is thought to possibly be a personality trait in itself (Rothstein & Goffin, 2000). The BIDR is a preferred measure to use because it eliminates various confounds that are found in other social desirability scales (Helmke, 2000). Reliability for the BIDR is relatively high, Paulhus (1998) found coefficient alphas from .80 to .86 for the impression management scale and .70 to .80 for the self-deception scale.

Positive and Negative Affectivity Scale (PANAS)

The Positive and Negative Affectivity Scale is a measure that was created to measure the opposite poles of mood (Molloy, Pallant, & Kantas, 2001). The two opposite poles are positive and negative mood and the measure assesses how people feel in general (Nemanick & Munz, 1994). Positive affect is described, in Roesch (1998), by Watson (1988, p. 1020) as “one’s pleasurable engagement with the environment.” It has also been found that extraverts tend to experience more positive affect than introverts (Roesch, 1998). Molloy et al. (2001) found that there were no statistically significant differences in gender for either the positive affectivity score or the negative affectivity score. Molloy et al. (2001) also found internal consistency with coefficients alphas of .88 for positive affectivity and .87 for negative affectivity. A comprehensive validity study was conducted by Roesch (1998), which found that the factors in both scales of emotion were significantly correlated with personality and had similar findings to the study by Molloy et al (2001).

Chapter 3

Review of Literature Relevant to Firefighters

Motivation

For firefighters to want to have to risk their own lives for the sake of others, there has to be something greater in it for them. Extrinsic motivators alone cannot explain why a person may choose firefighting as a career, since firefighters do not make a great deal of money (Cunningham, 2002). Their job is even ranked as one of the least desirable in the country because of the danger threats imposed, the low level of income, the high level of physical demands, the high level of stress, low level of job security due to job-related injury and the type of working environment (Casey, 2000). However, Casey (2000) also stated “If I were to measure the worth of a fireman’s job, I would probably put it number one, or very high up there.” One intrinsic motivator that may account for a person choosing the firefighting profession is saving another person’s life. Firefighters have one of the most dedicated and motivated professions in the world (Cunningham, 2002). A firefighter is also seen as one of the most ethical and honorable positions a person can hold; they are most trustworthy in the consensus of the public (Cunningham, 2002). To want to go into burning buildings and rescue complete strangers, firefighters have to be a very motivated group of people with a sense of organization and teamwork (Casey, 2000; Cunningham, 2000).

Job Satisfaction

Of all jobs out there, if you talk to a firefighter, he will say he has one of the most satisfying jobs (Brown, 2001). People join this profession to help other people. Kenneth Sylvia, an Emergency Medical Technician from New Bedford, stated “It’s [our job] is about helping people. I don’t think there is anyone in this service that is in it for any other reason. I don’t think

an EMT can be in it for any other reason” (Brown, 2001). Helping and rescuing people are one of the main draws to being a firefighter (Armstrong, 1999). The public does not view many other public professions, such as that of a police officer, the way they do a firefighter; firefighters are seen in the role of “rescuer, comforter, or helper” (Armstrong, 1999). Job satisfaction comes from the satisfaction with the job itself. Armstrong (1999) pointed out that after conducting many interviews, firefighters felt that how the public views them is the most rewarding aspect of their job.

Even though firefighting can be a very rewarding and satisfying career, there are many other aspects that one does not normally think of when they think of firefighters’ jobs. Firefighters have to put their lives in danger and occasionally, they are unable to save the victim in a fire (Bohl, 1995). When a victim is not saved, firefighters may be witness to death, injury, and the pain from a burn victim (Bohl, 1995). Because of these things associated with being a firefighter, many firefighters, after an event that was unsuccessful, can feel guilty, anxious, or depressed (Bohl, 1995).

There is also a great deal of other aspects to firefighters’ job. The public sees firefighters as heroes and rescuers, but the public does not see the daily tasks associated with being firefighters (Occupational Outlook Handbook, 2002). The public does not know or realize what goes on within the confines of the fire department station. In larger cities, the main duty of firefighters is to fight the fires around the city, however, in a mid-sized town, there are many other aspects to the job (Occupational Outlook Handbook, 2002). Firefighters have to make sure all of their equipment is clean and up to date, make sure the trucks are clean after a fire run, and make sure the department itself is clean. Firefighters are also required to participate in training classes to update themselves on what is current. They are also in charge of inspecting the

businesses in the city for fire hazards (Occupational Outlook Handbook, 2002). So, even though a firefighters job is highly rewarding overall, there are many aspects that can be tedious on a daily basis.

Purpose of Present Investigation

The purpose of the present investigation is to determine if there are relationships between job performance, job satisfaction, and personality variables in Central Wisconsin firefighters. A second purpose is to see what types of relationships there are and to locate any differences between the firefighters and other types of studies done on different groups. Also an in-depth analysis of the Job Descriptive Index results were reviewed for report back to the fire department on overall job satisfaction of the department.

The addition of the personality variables to job satisfaction may also help to account for some of the variance in job performance. As found in previous research, there are relationships between these different areas. This research will add to the existing literature by finding relationships between personality, job satisfaction, and job performance.

Chapter 4

Explanation of Assessments Used

Cattell's 16 Personality Factors (16PF)

Russell and Karol's (2002) manual on Cattell's 16 Personality Factors was the basis for the data that follows.

Raymond Cattell developed the 16PF in 1949. The 16PF is a personality assessment that measures a person's complete personality on the basis of 16 different factors. The factors measure everything from how people think about things, to how they view rules and laws to how people are in social situations and how open they are to disclosing information about themselves, to how emotional they are to others and to how they make decisions and their confidence with those decisions. There are 16 primary factors and five global factors. The primary factors are warmth (A), reasoning (B), emotional stability (C), dominance (E), liveliness (F), rule-consciousness (G), social boldness (H), sensitivity (I), vigilance (L), abstractedness (M), Privateness (N), apprehension (O), openness to change (Q1), self-reliance (Q2), perfectionism (Q3), and tension (Q4). Each of the primary factors is given two levels to each factor: low or high. The global factors are derived from the original 16 primary factors and represent a more broad of a definition of personality than the primary factors. The global factors are extraversion (EX), anxiety (AX), tough-mindedness (TM), independence (IN), and self-control (SC). Each global factor is divided into subsections; a low and high score for each factor. A description of each factor follows.

Warmth (A)

This factor refers to how people are involved with others and their interactions with others: the amount of warmth they show when being involved with someone. This is the first of

three factors that are significantly different between the sexes. Women on this factor tend to score slightly higher than men.

Low A: “reserved, impersonal, distant, formal.” They are people who are not very social and like to be alone a great deal. They are not comfortable with emotional closeness or interactions. Extreme scorers on this factor also may have had a past of difficult relationships due to their lack of warmth.

High A: “warm, outgoing, attentive to others.” They like close interactions and dealings with people. They are often seen as sympathetic and are the ones that people go to for support. People who score extreme on this scale may be seen as somewhat gullible.

Reasoning (B)

This factor measures people’s ability to derive answers and use logic and reasoning to find an answer.

Low B: “concrete.” They are not able to concentrate well on tasks at hand and may have lower intellectual ability.

High B: “abstract.” They are very intellectual and may have a higher level of education than those who scores lower. They are better able to solve verbal and numerical problems.

Emotional Stability (C)

The emotional stability factor deals with how people live with daily challenges and adaptability.

Low C: “reactive, emotionally unchangeable.” They may over-react and are more easily upset. They feel as though there is a lack of control for their life. The test in itself may be a stressor them and therefore may account for an extreme low C score.

High C: “emotionally stable, adaptive, mature.” This factor represents people who are not easily upset. They can remain calm in most situations. They take on challenges and go through them step-by-step. Emotions do not get in the way for decisions for a high C scorer. People who score extreme on this scale may use defenses like denial or avoiding negative feelings.

Dominance (E)

This factor measures how inclined one is to have control over others versus letting others have their way. This does not measure assertiveness because the dominance factor looks at how one wants to have power over others rather than just protect their own beliefs.

Low E: “deferential, cooperative, avoids conflict.” They tend to be submissive rather than dominant. They tend to not like confrontation and give in to others’ wishes. They do not like to make others disappointed.

High E: “dominant, forceful, assertive.” They are also aggressive and competitive. They like to tell people how things should be done and do not give in to others. They can be seen as “overbearing, stubborn, or argumentative.”

Liveliness (F)

This factor measures how spontaneous and restrained a person acts in situations. It measures the self-expression levels.

Low F: “serious, restrained, careful.” They are more serious and quiet. They tend to be less social and more cautious. They are seen as not very spontaneous and are more restricted.

High F: “lively, animated, spontaneous.” They are more social and energetic. They like social situations and extreme scorers can be sometimes seen as impulsive or unreliable. People with a high F also find it more difficult to restrain themselves in situations.

Rule-Consciousness (G)

The rule-consciousness factor measures how inclined a person is to follow the cultural norms and what is considered right and wrong.

Low G: “expedient, nonconforming.” They do not like to follow rules and regulations. They may lack internalized standards or they follow a different set of values.

High G: “rule-conscious, dutiful.” They are overly conforming. They follow all rules and guidelines perfectly. They follow all cultural norms and in extreme scorers, they are seen as inflexible, moralistic, and self-righteous.

Social Boldness (H)

This factor measures people act in social groups and situations: whether they like to be exhibitionists or stay to themselves.

Low H: “shy, threat-sensitive, timid.” They may get more easily embarrassed when talking in front of a group. They are, however, better listeners.

High H: “socially bold, venturesome, thick-skinned.” They are very at ease in social situations. They are very outgoing and love being around new people and in new situations. People who are extreme on this factor can be seen as attention seekers.

Sensitivity (I)

This is the second factor that has a gender difference: women tend to score slightly higher than men. This factor measures how people make decisions and how they make judgments.

Low I: “utilitarian, objective, unsentimental.” They tend to follow their head. They are viewed as tough, realistic, and logical. They do not give into their feelings when making decisions. Extreme scores on this factor can mean that people have trouble making decisions where feelings are required.

High I: “sensitive, aesthetic, sentimental.” They use their heart when making decisions. They are viewed as emotional, intuitive, and cultured. People with extreme scores on this factor can tend to not look at logistics when making decisions.

Vigilance (L)

This factor measures people’s tendency to believe in and trust others. It looks at how much people look at others motivations for actions.

Low L: “trusting, unsuspecting, accepting.” They are very trusting and forgiving. They feel that people are in general, all good. Extreme low scorers tend to get taken advantage of more easily.

High L: “vigilant, suspicious, skeptical, wary.” They are very distrustful of others. They tend to look at other motives and reasons for things, rather than take people at their word. They feel that there are underlying reasons to behaviors.

Abstractedness (M)

The abstractedness factor looks at the way that people give their attention to various things. This factor measures the thought process that one goes through when paying attention to things.

Low M: “grounded, practical, solution-oriented.” They sometimes lack creativity. Extreme scorers tend to be unimaginative and extremely literal.

High M: “abstracted, imaginative, idea-oriented.” They are fanciful and like to think of what can be rather than what is. They tend to think up new ideas and theories for things. Extreme scorers tend to be thought of as absentminded.

Privateness (N)

This factor measures how willing or not people are to discuss themselves and things that are personal to them.

Low N: “forthright, genuine, artless.” They are very open people who will talk about themselves on any issue. They will talk about any matter, no matter how personal.

High N: “private, discreet, non-disclosing.” They like to be very secretive and private. They are not open to discussing any topic that has to do with their personal lives. They only have a few people they trust and get involved in very few close relationships.

Apprehension (O)

This is the third factor that has differences between men and women. On this factor, women tend to score higher than men. This factor measures how much people tend to worry about things in their life. It also measures how they feel about the decision once it has been made.

Low O: “self-assure, unworried, complacent.” They are very confident. They are good in stressful situations because they can make decisions that they feel are correct. In extreme scores, people may be so rigid that they do not change decisions even if changes need to be made.

High O: “apprehensive, self-doubting, worried.” They have a tendency to be guilt-prone. They tend to have a lot of worry over things and feel anxious about decisions. They can also be overly sensitive to others’ reactions.

Openness to Change (Q1)

This factor measures how willing people are to change what is familiar to them: whether they like experimenting and change or like things to stay the same.

Low Q1: “traditional, attached to familiar.” They are resistant to change. They are comfortable with the way their life currently is and how it always has been; they do not like when change occurs. They like routine tasks and at the extreme, they may not want to change, even if a situation arises that needs change.

High Q1: “open to change, experimenting.” They like things that are always changing. They are more open-minded and will take initiative if they think things need changing. Extreme scorers may find it difficult to not want to change things, even if things are working correctly.

Self-Reliance (Q2)

The self-reliance factor measures how much people like to have close relationships with others. It looks at if one needs to feel part of a group or if they like to be on their own.

Low Q2: “group-oriented, affiliative.” They like group work and being a part of a group. They like to share their ideas with others and get feedback. In extreme situations, they may be unable to work in solitary even if the situation requires solitary work.

High Q2: “self-reliant, solitary, individualistic.” They enjoy working alone. They like to rely on themselves for answers. In extremes scores, they may not be able to be productive in group situations.

Perfectionism (Q3)

This factor measures how much people like to have things go their way and do things right. It looks at how inclined people are to keep things organized and also how much they like planning things.

Low Q3: “tolerates disorder, unexacting, flexible.” They can be lackadaisical and unorganized. They can be very flexible, but this may mean that they are unprepared and undisciplined in extreme cases.

High Q3: “perfectionistic, organized, self-disciplined.” They are goal-oriented and like things to be structured and organized. They tend to plan ahead and not like things which are unpredictable. At the extreme, they may seem rigid and inflexible.

Tension (Q4)

The tension factor looks at how nervous a person acts: whether they have a lot of energy and are fidgety or are relaxed. It also looks at how irritable a person can be when made to wait or when things are not going right.

Low Q4: “relaxed, placid, patient.” They tend to take things as they come and not worry about too much. At the extreme, they can seem unmotivated. They may not like to “change or push themselves.”

High Q4: “tense, high energy, impatient, driven.” They do not like waiting and their intensity helps them focus and helps in their motivation. Extreme scorers on this scale may be very impatient and irritable and it is suggested that the source of tension on extreme scorers should be examined.

Extraversion (EX)

This factor has been studied in almost every personality assessment. It measures how much people like social interactions overall. This global factor takes into account the primary factors of warmth, liveliness, social boldness, privateness, and self-reliance.

Low Extraversion = Introversion. They enjoy being alone and focus more on their inner thoughts and feelings. They tend to have few close personal relationships and they tend to take life more seriously. They do not like discussing matters of a personal nature and they like to work alone.

High Extraversion: love interactions with others and are more social. They like to have a lot of relationships with a lot of different people. They are comfortable around large groups and enjoy talking about themselves and disclosing information.

Anxiety (AX)

This is another factor that is usually assessed in other personality assessments. It is the factor that can be described by how people respond to the world around them. This factor is made from the primary factors of emotional stability, vigilance, apprehension, and tension.

Low Anxiety: not as easily upset as others. They are calm and trusting of others. They are self-assured and relaxed.

High anxiety: more upset by things and events, either internal or external. They may feel overwhelmed with things or unable to deal with daily life. They worry more and tend to be more suspicious of others motivations. They also get more easily frustrated by things.

Tough-Mindedness (TM)

Tough-mindedness is the factor that looks at how people deal with their problems at the cognitive level. This factor is made of the primary factors of warmth, sensitivity, abstractedness, and openness to change.

Low scorers = Receptivity. They tend to be more open when it comes to dealing with people or events. They like new ideas and thoughts and are more imaginative.

High Tough-Mindedness: like what seems logical and reasonable rather than imaginative. They do not like theory and what can be, rather they like what is currently. They also tend to be more impersonal.

Independence (IN)

This factor measures how people think and act: whether they push their ideas on others or give in to people. The independence factor is made of the primary factors of dominance, social boldness, vigilance, and openness to change.

Low scorers = Accommodation. They tend to give in to other's wishes and demands. They tend to go with whatever is being done at the time rather than think of new ideas. They also do not like to be as assertive as others.

High Independence: leaders and like to have things done their way. They are more open to speaking their mind and do not like to be controlled. They can tend to be very disagreeable and unaccommodating in extreme cases.

Self-Control (SC)

This factor deals with how likely people are to control their urges: whether they are able to inhibit their actions or they have to act out. This factor is made of the primary factors of liveliness, rule-consciousness, abstractedness, and perfectionism.

Low scorers = Lack of Restraint. They find it difficult to control their own behavior. They are seen as more spontaneous and carefree. They do not like to conform to rules and regulations. They tend to be more unorganized and unreliable.

High Self-Control: abide by all rules and laws. They are very controlled and cautious. They like to always meet their deadlines and practical and organized. They can be seen as too serious or goal-oriented.

Job Descriptive Index (JDI)

Balzer et al.'s (1997) manual for the Job Descriptive Index provided the information that follows.

Smith, Kendall, and Hulin developed the JDI in 1969. Smith et al. argue that that job satisfaction is composed of five different areas: work on present job, present pay, opportunities for promotion, supervision, and people on your present job. Validity and reliability of each of the scales is discussed in the literature review of the Job Descriptive Index.

A brief description of each of the five areas follows.

Work on Present Job

This scale is designed to measure how people feel about the job they are currently doing. It measures how satisfied an employee is with the work. The questions related to this area are designed to measure the different facets of a job including: “opportunities for creativity and task variety, allowing an individual to increase his or her knowledge, and changes in responsibility, amount of work, autonomy, job enrichment and job complexity.”

Present Pay

This scale measures how a people feel with their pay and the difference between what a people are actually getting and what they believe they should be getting. This area is influenced by various factors: the pay of employees doing the same job, the financial situation of the employee, the pay the employee received on previous jobs, and the economy.

Opportunities for Promotion

This scale measures how the employees feel about the procedures that the administration follows in accordance with giving promotions. The different factors that create satisfaction with promotions are “frequency of promotions, the importance of promotions, and the desirability of promotions.”

Supervision

This scale of the JDI measures how satisfied people are with their supervisors. Typically, if supervisors are employee-centered, meaning that they take interest in their employees and listen to them, than the employees are more satisfied with their supervisors. Employees also find more satisfaction with supervisors if the supervisors are deemed competent with their job.

People on Your Present Job (Co-workers)

This scale looks at the relationship and satisfaction that the employees have with their co-workers. This area of satisfaction is measured by how well employees get along with each other and how well they look up to their fellow employees.

Job in General (JIG)

The Job in General scale is a measure that is included with the Job Descriptive Index. The scale was developed to assess the overall satisfaction of people with their jobs. The JDI measures the different areas for satisfaction, but when the areas are added together, they do not give an accurate representation of people's overall job satisfaction, whereas this scale is designed to measure job satisfaction overall.

Balanced Inventory of Desirable Responding (BIDR)

The Balanced Inventory of Desirable Responding is a measure that looks at the tendency of people to respond in the most socially acceptable way when answering self-report measures (Paulhus, 1998). It is a measure that is divided into two subcategories: Self-Deceptive Enhancement and Impression Management. Self-Deception, as defined by Paulhus (1998), is “the tendency to give honest, but inflated self-descriptions.” The Impression Management aspect is defined as “the tendency to give inflated self-descriptions because of contextual factors” (Paulhus, 1998). This assessment was used to avoid faking good on the other assessments and to

see if there was any relationship between how a person answered the other assessments in relation with how they answered the BIDR.

Positive and Negative Affectivity Scale (PANAS)

The PANAS was developed by Watson and Clark (1988) and is comprised of 20 adjectives that are described as words that elicit either positive or negative feelings (Witt, 1994). The scale yields two scores: Positive Affect (PA) and Negative Affect (NA).

This measure was used to see if there was a relationship between the positive or negative mood of the person and the responses given.

Current Department Performance Evaluation

The most recent performance evaluation was completed in late 2001 on all firefighter personnel. Each firefighter was evaluated on the basis of 20 areas and skills. The current performance evaluation was different from previous years, as the evaluations used to be completed only the deputy chief that supervised each crew. This resulted in different deputy chiefs evaluating the personnel differently, as each had differing views on what was considered an average score. To resolve this issue, the deputy chiefs had a meeting to discuss what average would be considered so that each was giving out similar scores with the average in mind.

On the performance evaluation, 20 different areas/skills were assessed: ability to appraise EMS situations, proficiency in EMS skills and equipment use, ability to express himself/herself orally and in writing, initiative, ability to learn, self-improvement, dependability, cooperativeness and teamwork, ability to follow instructions, skill in use of firefighter tools, relationship with other employees, ability to appraise fireground situations, willingness to accept responsibility, quantity of work, quality of work, leadership, performance in training, safety,

appearance, and ability to appear before the public. Each factor was rated on a 1-10 Likert scale (1 being low, poor, or lacking and 10 being excellent, high, or expert).

Chapter 5

Selected Fire Department

General Overview

The selected fire department is one located in a mid-sized, central Wisconsin city. The department was tentatively founded in 1858 and consisted of a bucket brigade and approximately nine firefighters and one captain, all of whom were volunteers. The department moved from the original building to the current one in 1874. In 1892, the first paid fire department was established. The current fire department consists of 38 full-time, paid employees.

Employees

There are a total of 38 employees at the chosen fire department. Of these, 32 are firefighters, three are deputy chiefs, one is training officer, one is confidential secretary, and one is chief, all of who are Caucasian. There are 36 men and two women on staff; one woman holds a position of firefighter and the other holds the position of confidential secretary. All positions are full-time, paid positions. There are three shifts comprised of 11 firefighters for each shift.

Job Description

The Occupational Outlook Handbook (2002) gives a very complete description of what tasks firefighters perform. The following is paraphrased from that job description and information directly pertaining to the selected department is included.

One of the main differences between firefighting and other types of jobs is that firefighters deal with shift work, which includes longer than normal hours and an irregular schedule. The department chosen for this research has three shifts and firefighters are required to work a 24-hour shift, with rotating on and off for five days and then having four days off.

Another main difference in firefighting is that the work is of a higher stress level than normal and people's lives are in firefighters hands. However, this is a draw to the job for many as they feel that their job is very rewarding and satisfying.

The main duty of firefighters is to protect the city and public from many different types of emergencies. In many cases, the firefighters are the first on the scene of an accident so that they can put out any fires that may exist, help the police department, and treat any injuries on the scene. In the case of the fire department in this study, many of the firefighters are also Emergency Medical Technicians (EMTs) or paramedics, so the duties at the scene of an accident are vital to the safety and well being of those involved. Firefighters also need to have a good sense of teamwork and organization so that they can work together most effectively to solve problems that may arise when out on a call.

Specific duties of a firefighter when on a fire run can vary from connecting the hoses line to the fire hydrant, operating the pumps for water to the hose, and positioning of the ladders to get the water to the fire. Other tasks while at a fire include rescuing victims, trying to salvage the building as much as possible, providing emergency medical attention, and ventilating the area.

Other types of tasks are performed when firefighters are not responding to fire calls. These duties are to clean and maintain equipment, practice drills, prepare written reports on fire incidents, read up on current literature relevant to firefighting or other emergency medical procedures, attend classes to enhance their knowledge in various areas, give tours of the department to visitors, and conduct fire inspections of local businesses.

Chapter 6

Methodology

Participants

The participants for this study were all employees of a central Wisconsin fire department. The study was performed only on those who either currently or previously held a firefighter status. In total, 31 members of the fire department were surveyed; 28 of the participants held firefighter status and three held deputy chief status. Thirty men and one woman completed the assessments. Tenure in the department ranged from 2-30 years. Each participant was given the choice to participate in the research as stated in the informed consent form handed to each participant (Appendix A).

Materials

The materials required for this research included four different assessments: Cattell's 16 Personality Factors, the Job Descriptive Index with the Job in General, the Balanced Inventory of Desirable Responding, and the Positive and Negative Affectivity Scale. The other instrument was a current (2001) performance evaluation that was completed by the deputy chiefs of the department for each firefighter personnel.

Procedure

The author contacted the chief of the department and discussed the possibility of conducting a study investigating relationships between job performance, job satisfaction, and personality; he granted permission to carry out the research. After agreement on the terms of the research, steps were taken to ensure confidentiality by having the confidential secretary aid in the process of removing names from the performance evaluations and later handing the evaluations to the participants. At no time did the researcher see the performance evaluations with the

firefighter names on them, nor did she take the evaluations out of the department. Because of the extreme confidentiality of these evaluations, they were only given to the researcher, by the firefighters, after the secretary deleted the names and all other identifiers.

The researcher scheduled an hour and a half of classroom time for each of the three shifts at the fire department. During this time, the informed consent form (Appendix A) and the instructions for the assessments (Appendix B) were handed to each participant and it was made sure that all questions pertaining to the research that the participants had were answered. Each participant received a large envelope containing the assessment instruments. At this time, the secretary handed out the sealed envelopes with the confidential performance evaluations sealed inside to the participants so they could put them in the large envelope with the other assessments. A copy of the instructions was handed out to each participant and the instructions for each assessment were also read and any questions were answered. Participants were also divided into four groups according to job tenure. Each employee was given a number that corresponded with a group and were instructed to write this number on the inside flap of the large envelope. After filling out the questionnaires, the participants put these along with the confidential performance evaluation into the large envelope and handed the package back to the researcher.

Data Analysis

The data was analyzed giving thought to the main hypothesis: to find relationships between job performance, job satisfaction, and personality. Each assessment was looked at individually and descriptive statistics were computed for each. Frequency reports on the specific questions were run to determine agreement within the measures. All assessments were also correlated with one another to view any existing relationships between the variables.

Chapter 7

Results

Cattell's 16PF

For each of the primary factor scores on the 16PF, a raw score was converted to a sten score. The sten score is a standardized score that measures the factor on a scale from one to ten, with a mean of 5.5 and a standard deviation of two so that a “normal” score is considered to be from 3.5 to 7.5. For each global factor of the 16PF, a score ranging from zero to 100 could be computed. According to the 16PF manual (Russell & Karol, 2002), the more a score falls from the mean, in a higher or lower direction, the more extreme the score. If an extreme score is seen, then the trait will most likely be seen in the participants' behavior. As shown in the 16PF descriptives Table 1.1, all of the sten scores for the personality profile data at the fire department were within mean range, with the lowest mean being 4.67 on Factor I (Sensitivity) and the highest being 6.10 on Factor Q2 (Self-Reliance). The standard deviations also fell within the normal range for this data set. Frequencies for the data are more clearly defined in the section for that factor. In viewing the data for the global factors, more variance was seen due to the inclusion of the other factors in a global factor scale. The data for the primary and global factors can be viewed in Table 1.1, the mean sten scores for the primary factors in Figure 1, and the global sten scores in Figure 2.

Warmth (A)

This factor had the lowest mean ($M = 4.07$). The range for this score was from one to eight, and as viewed Table 1.2, for the Factor A frequency, 29% of the sample population had a sten score of four.

Reasoning (B)

This factor was less diverse. The mean ($\underline{M} = 5.94$) was a little above the sten score mean, but within normal range. Factor B frequency can be viewed in Table 1.3, and shows that 35.5% of the participants had a sten score of six on this factor.

Emotional Stability (C)

For this factor, the most reported sten score was five, with 38.7% having this score. The mean ($M = 5.78$) was within the normal range for this factor. The frequency can be viewed in Table 1.4.

Dominance (E)

This factor was split, as viewed in Table Five, 29% of the participants had sten scores for both four and five, thus, the mean ($\underline{M} = 4.99$), due to the split of sten scores. Table 1.5 illustrates the frequency for this factor.

Liveliness (F)

This factor also had two of the same percentages; 29% of the participants had sten scores for both four and five. The mean ($\underline{M} = 5.00$) is the exact mean considered by the creators of the 16PF to be on the exact normal scale. Table 1.6 shows the frequency statistics for this factor.

Rule-Consciousness (G)

For this factor, participants had the same sten score frequencies, as both five and six had a 32.3% for the participants scoring. For this factor, the mean ($\underline{M} = 5.48$) was a bit above the normal mean, but still within normal range. The frequency data can be viewed in Table 1.7.

Social Boldness (H)

Most of the participants had a sten score of five for this factor, with 25.8% having this as their sten score. The mean ($\underline{M} = 5.32$) was just above the norm. Table 1.8 shows the frequency data for this factor.

Sensitivity (I)

This factor had the lowest sten score percentage, although it the majority of the participants had scores of three to five, the highest percentage (32.3%) had a sten score of three. This is still considered within the normal range for the 16PF. The mean ($M = 3.90$) for this factor was also the lowest. This frequency data can be viewed in Table 1.9.

Vigilance (L)

This factor was relatively split in the middle, with almost the same percent having a sten score of five (29%) or six (32.3%). This reflected the mean ($\underline{M} = 5.99$) being a little higher. Data of the frequencies for this factor are in Table 1.10.

Abstractedness (M)

This was another factor that had two sten scores representing the majority of the participants; 32.3% had a sten score of five and 25.8% had a sten score of six. The mean ($\underline{M} = 4.94$) was just under the 16PF mean. Frequency data for this factor is in Table 1.11.

Privateness (N)

This factor had many different percentages and these can be viewed in Table 1.12. The highest percentage was 22.6% having a sten score of six, but the sten scores were split amongst the other sten scores as well. The mean ($\underline{M} = 5.77$) was a bit above the normal, but still within the standard deviations for the 16PF.

Apprehension (O)

The largest percentage of sten scores for this factor was a sten score of four (29.0%), however, 25.8% had a sten score of six, thus resulting in a mean ($\underline{M} = 5.39$). The frequency data is displayed in Table 1.13.

Openness to Change (Q1)

The largest percentage for this was a sten score of five (38.7%). A large percent (32.3%) also had a sten score of four. The mean ($\underline{M} = 4.90$) reflected the large percentages and the frequency data can be viewed in Table 1.14.

Self-Reliance (Q2)

This factor had the highest mean ($\underline{M} = 6.10$). This was due to the large percentages having a score of five (25.8%), six (32.3%), and a modest percent (12.9%) having a score of eight. The frequency data is in Table 1.15.

Perfectionism (Q3)

For this factor, the highest percentage (35.5%) had sten scores of six. The participants' sten scores on this factor had a mean ($\underline{M} = 5.65$). Frequency data for this factor can be viewed in Table 1.16.

Tension (Q4)

This factor had percentages that were split on a sten score of five (25.8%) and six (29.0%), resulting in a mean ($\underline{M} = 5.58$). This frequency data is viewed on Table 1.17.

Extraversion (EX)

The highest percentage was 9.7% with a score of 59, however, 48.4% scored above a 50 for this global factor. Scores on this factor ranged from 13 to 92 and had a mean of ($\underline{M} = 48.06$). Data for this factor can be viewed in Table 1.18.

Anxiety (AX)

For this factor, the highest percentage scored a 51, with 12.9% having that score. Once again, 48.4% scored above a 50 on this global factor. On this factor, scores ranged from 25 to 96 and had a mean ($M = 54.68$). Frequency data can be viewed in Table 1.19.

Tough-Mindedness (TM)

This factor had two scores have the same percentage (9.7%): 65 and 70. For this global factor, scores ranged from 45 to 92 and 87.1% scored above 50 for this factor. The mean for this factor was 69.81). Table 1.20 shows the frequency data for this factor.

Independence (IN)

For this factor, the highest percentage was 12.9% with a score of 51. Scores ranged from 21 to 83 for this global factor and had a mean of ($M = 50.42$). Frequency data for this factor is found in Table 1.21.

Self-Control (SC)

Scores on this factor were very diverse as many scores had the same percentage. The frequency data can be viewed in Table 1.22. The ranges of scores on this global factor were 33 to 80, with a mean ($M = 57.71$).

Job Descriptive Index (JDI)

The lowest possible score on the JDI could be a score of zero and the highest score being 54. The lower the score, the more unsatisfied the person is with that facet of the assessment. By looking at the descriptive statistics in Table 2.1 and means in Table 3, people were most satisfied with the job in general ($M = 45.07$), work on present job ($M = 42.97$), and people on present job ($M = 38.46$). People were most unsatisfied with pay ($M = 21.45$), supervision ($M = 20.10$), and opportunities for promotion ($M = 13.10$).

In computing frequency reports on specific statements, there were some statements that had near complete agreement. These reports can be viewed in Tables 2.2 through 2.7. Reports of these statements are listed below.

Work on Present Job

Within this scale, 81.8% answered “yes” to that they found their job satisfying. Another statement that received a high “yes” score or 81.8% was on the rating of “good”. The same percentage also rated their job as giving a sense of accomplishment and being respectable. When replying to whether the job was considered “useful”, 84.4% agreed with the statement and 78.8% felt that their job was challenging. The data frequency for these questions can be viewed in table 2.2.

Present Pay

Table 2.3 displays the frequencies for this scale. In response to whether the pay was considered adequate, 84.8% agreed with the statement, however, 84.8% also agreed with the statement that the pay was considered “barely livable” and “bad”.

Opportunities for Promotion

On this scale, most people were split with agreeing and disagreeing, however, on the scale of it being a “dead-end job”, 72.7% agreed with the statement. A frequency report can be viewed in Table 2.4.

Supervision

Overall on this scale, scores were relatively split with agreement and disagreement as well. Table 2.5 displays this information. However, there were a few categories with a substantial difference. On “has favorites”, 66.7% agreed with the statement. Sixty-nine percent

agreed with the “stubborn” statement. Another 63.6% agreed with the statement of “poor planner”.

People on Your Present Job (Co-workers)

On the “helpful” question, 75.8% agreed with the statement. Other statements with a large amount of agreement were 72.7% with the statement of “responsible” and 81.8% agreed with “intelligent”. Frequency data for this scale can be seen in Table 2.6.

Job in General (JIG)

Overall Satisfaction

On this scale, 78.8% agreed with “pleasant” and the same percentage agreed with “bad”. This same percent also agreed that the job is “worthwhile”, but 75.5% agreed with the statement that the job is “worse than most”. Table 2.7 shows the frequency for these questions.

Balanced Inventory of Desirable Responding (BIDR)

The descriptive statistics for the Balanced Inventory of Desirable Responding are found in Table 3.1. For the BIDR, scores could range from one to seven for each question. A one was considered “not true at all” and a seven was “very true”, with a three being “somewhat true”. The lowest mean was found for statement 24 “I never swear” ($\underline{M} = 2.10$). Statement 33 “I sometimes drive faster than the speed limit” also had a relatively low mean ($\underline{M} = 2.13$). The highest mean was found on statement 36 “I never take things that don’t belong to me” ($\underline{M} = 5.81$). Statements 17 “I am very confident of my judgments” ($\underline{M} = 5.71$), 21 “I sometimes tell lies if I have to” ($\underline{M} = 5.68$) and 30 ($\underline{M} = 5.63$) “I always declare everything at customs” also had high mean scores.

Positive and Negative Affectivity Scale (PANAS)

This scale measured participants’ positive or negative affectivity on a Likert scale of one to five, with one being “very slightly or not at all”, and five being “extremely” with total scores

being zero to 50. Descriptive statistics for this measure can be viewed in Table 4.1. For this measure, the positive affectivity scale ($M = 37.16$) had a higher mean than the negative affectivity scale ($M = 16.26$). The lowest means for these statements was on the NA scale and were “ashamed” ($M = 1.26$), “scared” ($M = 1.29$), and “afraid” ($M = 1.39$). The highest means were on the PA scale and were “active” ($M = 4.00$), “alert” ($M = 4.00$), and “proud” ($M = 3.97$).

Current Department Performance Evaluation

This was the 2001 performance evaluation from the fire department. There were 20 different areas and skills that were measured. Descriptive statistics can be viewed on Table 5.1 and means in Figure 4. To better understand the findings, one must know what was considered “normal” by the department. As stated previously, the deputy chiefs had discussed what was a normal score for each factor. Each area/skill had a different “normal” score. Most of the areas had a score of 6 that was considered normal. However, Cooperativeness and teamwork and quality of work, both had a normal score of 7. Initiative had the lowest normal score of 4, and self-improvement, dependability, and neat at all times all had a 5 for a normal score. Also, it is interesting to note that for all the mean scores, the standard deviation was never a 2 or above, so most of the staff fell right around the mean score. Overall, for every area and skill, the department had means that were above the normal score that was decided by the deputy chiefs. Also, the mean total performance evaluation score was considered to be 117, but the mean for the department was 140.06, well above the normal. The highest areas for the department means were in “skill in use of firefighter tools” ($M = 7.76$), “cooperativeness and teamwork” ($M = 7.64$), and “quality of work” ($M = 7.64$). The lowest area of the department was for “initiative” ($M = 5.52$), but this was still above the normal score.

Overall Findings – Correlations

There were a lot of significant correlations found within the data. The various assessment instruments all had correlation with the other variables on the specific assessments. Within the variables being measured to find specific correlations (the Job Descriptive Index facets, the Job in General, the personality factors, job tenure, and job performance) there were a few significant correlations.

Job Descriptive Index. This measure did not reveal any significant correlations to job performance on any of the scales.

This assessment had negative correlations on the Work on Present Job scale with Factor O – Apprehension ($r = -.41, p < .05$), and the global factor of Anxiety ($r = -.38, p < .05$).

The Pay scale had negative and positive correlations. Pay was negatively correlated with Dominance ($r = -.36, p < .05$) and Independence ($r = -.43, p < .05$). Pay was positively correlated with Rule-Consciousness ($r = .36, p < .05$). It was also negatively correlated with the global factor of Artistic ($r = -.38, p < .05$), Social Control ($r = -.37, p < .05$), and Creative Achievement ($r = -.41, p < .05$).

Opportunities for Promotion had a positive correlation with Rule-Consciousness ($r = .36, p < .05$) and negative correlation with Independence ($r = -.42, p < .05$) Artistic ($r = -.37, p < .05$), Social Control ($r = -.37, p < .05$), and Creative Achievement ($r = -.41, p < .05$).

The Supervision scale had negative correlations with Factor E – Dominance ($r = -.36, p < .05$) and global factors of Independence ($r = -.44, p < .05$), Artistic ($r = -.38, p < .05$), Social Control ($r = -.39, p < .05$), and Creative Achievement ($r = -.41, p < .05$).

People on Your Present Job (Co-workers) had a negative correlation with Factor E – Dominance ($r = -.45, p < .05$), Q4 – Tension ($r = -.36, p < .05$), and global factor of Independence ($r = -.41, p < .05$).

Job in General. This assessment instrument was negatively correlated with Factor E – Dominance ($r = -.44, p < .05$), Q4 – Tension ($r = -.36, p < .05$), and global factor of Independence ($r = -.40, p < .05$).

Job Tenure. The length of time on the job was negatively correlated to the personality factors of Factor H – Social Boldness ($r = -.40, p < .05$) and positively correlated with Factor O – Apprehension ($r = .37, p < .05$).

Job Performance. The Job Performance Evaluation total score was correlated to various personality factors. Performance was positively correlated to Factor C – Emotional Stability ($r = .47, p < .05$), Factor F – Liveliness ($r = .50, p < .05$), and the global factors of Realism ($r = .53, p < .01$), Self-Esteem ($r = .48, p < .05$), and Leadership Potential ($r = .53, p < .01$). Job Performance was negatively correlated with Factor I – Sensitivity ($r = -.42, p < .05$) and the global factor of Social Sensitivity ($r = -.41, p < .05$). The evaluation score was also positively correlated with the Positive Affectivity scale ($r = .48, p < .05$).

Chapter 8

Discussion

Overall, with this study, the results were not overwhelmingly surprisingly. The lowest means for factors on the 16PF were on Warmth and Sensitivity. Because firefighters have to deal with burn victims, death, and as EMTs, many other conditions, like car accidents, among other things, having a low personality score of warmth and sensitivity is not surprising. The highest mean was found for the Self-Reliance factor; firefighters have to have a high self-reliance in order to be able to do their job and know their abilities when going into a hazardous situation.

The job satisfaction survey (Job Descriptive Index) found that overall, the firefighters were satisfied with their jobs. They were not as satisfied with pay, opportunities for promotion, and supervision, as on the other facets. As discussed in the literature review, firefighters do not make a great deal of money for the danger aspect of the job, so it was expected that they would not be satisfied with pay. Opportunities for advancement in this department are limited due to the following reason: there are only four positions that are considered supervisory or management, there are 32 firefighters, the turnover rate is not high, and people move up to positions when someone retires.

Some of the questions on the Job Descriptive Index had a great deal of agreement that may sound negative. On the People on Present Job facet, a great deal agreed that their co-workers were “boring”, however, because the fire department is located in a mid-sized city, there is a lot of time that is filled with daily chores and duties, rather than fighting fires.

On the overall satisfaction assessment (Job in General), a majority had agreed with the statement that their job was “worse than most”. As stated in the literature previously, the firefighting profession is not the most pleasant due to the hazards, dangers, and pay. But because

of the other motivations, it is a job that is quite satisfying, as a majority also agreed that the job was “worthwhile”.

On the performance evaluations, the department overall had a very high mean in regards to what the deputy chiefs had set forth as being average or normal. One of the highest areas was cooperation and teamwork, which is a necessity with being a firefighter; they have to be able to work together and rely on one another when in dangerous situations.

Various factors were found to correlate between job satisfaction, personality, and job performance. Work on present job was negatively correlated with anxiety, so if a person was more anxious, then their satisfaction with their work on present job went down. This would make sense that if a person is more anxious, they may not be as satisfied.

Rule-Consciousness was positively correlated to pay and opportunities for promotion. So, if a person was more rigid and followed the rules, then there was a relationship that they were more satisfied with their opportunities for promotion and pay. This would make sense because when one follows the rules, they feel that promotions and pay will be reflected in the way they are doing their job.

Supervision was negatively correlated with dominance, independence, and social control. This means that there was an inverse relationship with these variables. The more controlling, dominant, and independent a person was, the less satisfied they were with their supervisors.

In regard to the overall job satisfaction, there were negative correlations with dominance, tension, and independence. If they were experiencing more tension or tended to be tense people, then they had lower job satisfaction. The more dominant they are, they tend to experience less satisfaction.

Job performance was positively correlated with the personality factors of liveliness, leadership potential, and self-esteem. The more active and satisfied they were with themselves, the better they performed at work. Whereas, the more sensitive they were in general and in social contexts, they tended to perform less better at work. The positive affectivity scale was also positively correlated with this measure, so the more positive a person was, the better they performed, which is in congruence with the previous research.

Conclusion

Overall, there were not any surprising findings. The study conducted corresponded with the previous research as to what factors can predict job performance. Because the study was conducted on a small sample in a mid-sized city, more research on different samples would need to be conducted to draw further conclusions. Also, there is a lack of sufficient research on what personality factors make an exemplary firefighter, and more research should be done because the firefighting profession is very different from most every other profession.

References

- Abraham, R. (2000). Organizational cynicism: Bases and consequences. Genetic, Social, and General Psychology Monographs, 126, 269-293.
- Acton, G. S. (2002). Five-factor model. Retrieved from the Web 4/20/02.
<http://www.personalityresearch.org/bigfive.html>.
- Armstrong, D. (1999). Cast in heroic role, firefighters bask in public acceptance. Retrieved from the Web 3/20/02.
http://www.boston.com/globe/metro/packages/fire_department/heroes.htm.
- Balzer, W. K., Kihm, J. A., Smith, P.C., Irwin, J.L., Bachiochi, P.D., Robie, C., Sinar, E.F., & Parra, L.F. (1997). Users' Manual for the Job Descriptive Index and the Job in General Scales. Bowling Green, OH: Bowling Green State University.
- Baute, P. (2000). Using psychological screening to select top performers for firefighting. Retrieved from the Web 3/20/02. <http://paschalbaute.com/firefighting.htm>.
- Bohl, N. (1995). Measuring the effectiveness of CISD: A study. Fire Engineering, 148(8), 125-127.
- Brayfield, A. H. & Crockett, W. H. (1955). Employee attitudes and employee performance. Psychological Bulletin, 52, 396-424.
- Brown, C. (2001). EMT's: In their own words. Retrieved from the Web 3/20/02.
<http://www.s-t.com/daily/06-01/06-10-01/e02li118.htm>.
- Buss, D. M. (1992). Manipulation in close relationships: Five personality factors in interactional context. Journal of Personality, 60, 477-499.
- Casey, H. (2000). Job book ranks firefighting at bottom. Retrieved from the Web 3/20/02.
<http://members.tripod.com/iaff384/id85.htm>.

Christiansen, N. D. & Goffin, R. D. (1994). Correcting the 16PF for faking: Effects on criterion-related validity and individual hiring. Personnel Psychology, *47*, 847-861.

Cunningham, T. M. (May 5, 2002). Ethical conduct for the fire service and its importance. Retrieved from the Web 3/20/02. <http://www.withthecommand.com/05-May/MD-ethics-0525.html>.

Cunningham, T. M. (2002). Leadership 101: Theories of Motivation. Retrieved from the Web 3/20/02. <http://www.withthecommand.com/national/motivate101.html>.

George, J. M. & Brief, A. P. (1996). Motivational agendas in the workplace: The effects of feelings on focus of attention and work motivation. Research in Organizational Behavior, *18*, 75-109.

Goffin, R. D., Rothstein, M. G., & Johnston, N. G. (2000). Predicting job performance using personality constructs: Are personality tests created equal? Problems and solutions in human assessment. Norwell, MA: Kluwer Academic Publishers. 249-263.

Helmes, E. (2000). The role of social desirability in the assessment of personality constructs. Problems and solutions in human assessment. Norwell, MA: Kluwer Academic Publishers. 21-37.

Iaffaldano, M. T. & Muchinsky, P. M. (1985). Job satisfaction and job performance: A meta-analysis. Psychological Bulletin, *97*, 251-273.

Isen, A. M. & Baron, R. A. (1991). Positive affect as a factor in organizational behavior. Research in Organizational Behavior, *13*, 1-53.

Jacobs, R. & Solomon, T. (1977). Strategies for enhancing the prediction of job performance from job satisfaction. Journal of Applied Psychology, *62*, 417-421.

Judge, T. A., Thoresen, C. J., Bono, J. E., & Patton, G. K. (2001). The job satisfaction-job performance relationship: A qualitative and quantitative review. Psychological Bulletin, *127*, 376-407.

Kinicki, A. J. (2002). Assessing the construct validity of the job descriptive index: A review and meta-analysis. Journal of Applied Psychology, *87*, 14-32.

Kunan, T. (1955). The construction of a new type of measure. Personnel Psychology, *8*, 65-78.

Landy, F. J. (1989). Psychology of work behavior. Pacific Grove, CA: Brooks/Cole.

Liao, H., Arvey, R. D., & Butler, R. J. (2001). Correlates of work injury frequency and duration among firefighters. Journal of Occupational Health Psychology, *6*, 229-242.

Lunenburg, F. C. (1992). The 16PF as a predictor of principal performance: An integration of quantitative and qualitative research methods. Education, *113*, 68-74.

Molloy, G. N., Pallant, J. F., & Kantas, A. (2001). A psychometric comparison of the positive and negative affect schedule across age and sex. Psychological Reports, *88*, 861-863.

Morrison, K. A. (1997). How franchise job satisfaction and personality affects performance, organizational commitment franchiser relations, and intention to remain. Journal of Small Business Management, *35*, 39-68.

Nemanick Jr., R. C. & Munz, D. C. (1994). Measuring the poles of negative and positive mood using the positive affect negative affect. Psychological Reports, *74*, 195-200.

Occupational Outlook Handbook (2002). Firefighting occupations. Retrieved from the Web 3/20/02. <http://www.bls.gov/oco/ocos158.htm>.

Organ, D. W. (1988). A restatement of the satisfaction-performance hypothesis. Journal of Management, *14*, 547-557.

Paulhus, D. L. (1998). Paulhus deception scales: Measures the tendency to give socially desirable responses. Retrieved from the Web 4/2/02.

<http://www.mhs.com/healthcaredocs/PDS.pdf>.

Roesch, S. C. (1998). The factorial validity of trait positive affect scores. Educational and Psychological Measurement, 58, 451-466.

Roethlisberger, F. J. & Dickson, W. J. (1939). Management and the worker. Cambridge, MA: Harvard University Press.

Rothstein, M. G. & Goffin, R. D. (2000). The assessment of personality constructs in industrial-organizational psychology. Problems and solutions in human assessment. Norwell, MA: Kluwer Academic Publishers. 215-245.

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. Psychological Monographs, 80(1), no. 609.

Russell, M. & Karol, D. (2002). 16PF Fifth Edition with updated norms: Administrator's Manual. Champaign, IL: Institute for Personality and Ability Testing, Inc.

Schneider, B. & Dachler, H. P. (1978). A note on the stability of the Job Descriptive Index. Journal of Applied Psychology, 63, 650-653.

Schuerger, J. M. & Ekeberg, S. E. (1994). 16PF scores and machine operators' performance. Perceptual and Motor Skills, 79, 1426.

Smith, P. C., Kendall, L. M., & Hulin, C. L. (1969). The measurement of satisfaction in work and retirement. Chicago, IL: Rand McNally.

Spector, P. E. (1997). Job satisfaction: Application, assessment, causes, and consequences. Thousand Oaks, CA: Sage Publications, Inc.

Wanous, J. P. (1974). A causal-correlational analysis of the job satisfaction and performance relationship. Journal of Applied Psychology, *59*, 139-144.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. Journal of Personality and Social Psychology, *54*, 1063-1070.

Witt, L. A. (1994). Perceptions of organizational support and affectivity as predictors of job satisfaction. Retrieved from the Web 4/2/02. <http://www.cami.jccbi.gov/AAM-400A/Abstracts/1994/am94-02.html>.

Appendix A

Informed Consent Form

March 20, 2002

My name is Jennifer Skibba. I am currently a graduate student in the Applied Psychology program at the University of Wisconsin - Stout. This semester, I am working on research for the completion of my thesis.

You can help me in my research by completing a few survey instruments. Upon completion, seal it in the provided envelope and hand it back to me. An unidentifiable copy of your performance evaluation will be handed out to you in a sealed envelope. It would be beneficial to my research and results if you would also enclose this unidentifiable performance evaluation along with the other survey instruments. Please note that your name has been removed from your performance evaluation and there are no identifiers on the evaluation. Should you choose to include it with your surveys, simply open the envelope and enclose the evaluation with the other survey materials.

These surveys, all the questions, and submission of the performance evaluation are all optional. You may choose not to answer any questions you do not want to answer. You can choose to stop filling out the instruments at any time. You can choose not to include the performance evaluation. By filling out the survey you are giving your consent for participating in this research.

This research is being conducted under strict confidentiality. I am the only person who will see the completed surveys. The chief and the department will only get a summary of the findings and no individuals will be identified.

Feel free to ask any questions at any time. If you have questions at a later date, you may call me at 715-341-9966. If you have any further concerns about this research, you may also contact my research advisor, Dr. James Tan at 715-232-5224.

Thank you for your time and cooperation in helping me complete my research for my Master's degree.

Sincerely,

Jennifer Skibba

Appendix B

Instructions

1) Overview

- This is the work for my thesis that I have been leading up to with my work here
- The surveys will take about an hour and a half to complete
- All of this will make more sense once my data is collected and my paper is finished
- I want to stress confidentiality with this
 - o This paper had to go through the International Review Board of ethics 3 times to ensure confidentiality
- No names will be mentioned in my paper
- The fire department is not even specified
 - o The working title of my paper is Job Performance in Relation to Job Satisfaction and Personality in Central Wisconsin Firefighters
 - o The department is described as a department located in a mid-size, central Wisconsin city

2) Informed Consent Form

- Read over carefully and ask any questions you may have
- You have the option to choose if you want to fill out any or all surveys, you don't have to answer every question and you may stop at any time
- If for some reason you do have questions and would like to speak to either me or my advisor, you can arrange with me a time to take the surveys

3) Performance Evaluations

- I have not yet had these in my possession
- Your names and any identifiers have been removed from the evaluations
- The performance evaluations are sealed in an envelope and the only place your name is located is on the outside of the envelope
- After you complete the surveys, if you choose to hand in your performance evaluation, open the sealed envelope and put it in with your other surveys

- As with everything else, handing in your performance evaluation is completely optional
- I would appreciate you completing all questions and handing in your performance evaluation so that my research is as accurate as possible
- I will only have your performance evaluations for one day, as I will be bringing them back in tomorrow and shredding them
- There is no way for me to know who's performance evaluation belongs to whom, because this is completely confidential
- No one else will see the completed surveys or evaluations except me

4) Open packets

- For the sake of comparison value between groups, I have divided everyone into four different groups dependent upon how long you have worked here
 - There are about 6-8 people to each group, so that no one can be identified by this variable
 - I am assigning each group a number and I would like you to write this number on the inside flap of the large envelope
 - Group 1
 - 0-6 years
 - Group 2
 - 7-15 years
 - Group 3
 - 16-24 years
 - Group 4
 - 25 and over
- **16PF booklet and answer sheet**
 - This survey will tell your personality profile according 16 different factors
 - Do not write in the booklet, an answer sheet is provided for your answers
 - Do not write your name or sex on the answer sheet
 - Read directions to 16PF

- **Job Descriptive Index**
 - This survey will be the job satisfaction variable
 - Read Directions to each set of questions
- **BIDR**
 - There are two sides, make sure you fill out both sides completely
- **PANAS**
 - Read the directions and answer questions as honestly as possible
- As stated previously, you have the option to not take any of the surveys. You may take only the ones you choose. You also do not have to answer any questions which you may find to be offensive or undesirable to answer

5) Upon completion of surveys

- Put all of the survey instruments and answer sheets back into the envelope provided
- If you are handing in your performance evaluation, make sure to take it out of the envelope with your name on it and only hand in the evaluation
- If you are not handing in your performance evaluation, it is yours to do whatever you choose: hand it back to Lorna, shred it, take it home, etc.
- Bring all materials back up to me

6) Any questions?

- If not, you may begin

Thank you – I really appreciate you taking the time to fill out these surveys for me and help me with my thesis work

Appendix C

BIDR Version 6 – Form 40

Instructions: Please read each of the statements below carefully. Using the scale below as a guide, write a number beside each statement to indicate how much you agree with it. Remember, we are interested in **your honest opinions**, not what you think sounds most acceptable.

<u>Not True</u> 1	2	3	Somewhat True 4	5	6	Very True 7
--------------------------	---	---	--------------------	---	---	----------------

- _____ 1. My first impressions of people usually turn out to be right.
- _____ 2. It would be hard for me to break any of my bad habits.
- _____ 3. I don't care to know what other people really think of me.
- _____ 4. I have not always been honest with myself.
- _____ 5. I always know why I like things.
- _____ 6. When my emotions are aroused, it biases my thinking.
- _____ 7. Once I've made up my mind, other people can seldom change my opinion.
- _____ 8. I am not a safe driver when I exceed the speed limit.
- _____ 9. I am fully in control of my own fate.
- _____ 10. It's hard for me to shut off a disturbing thought.
- _____ 11. I never regret my decisions.
- _____ 12. I sometimes lose out on things because I can't make up my mind soon enough.
- _____ 13. The reason I vote is because my vote can make a difference.
- _____ 14. My parents were not always fair when they punished me.
- _____ 15. I am a completely rational person.
- _____ 16. I rarely appreciate criticism.
- _____ 17. I am very confident of my judgments.

- _____ 18. I have sometimes doubted by ability as a lover.
- _____ 19. It's all right with me if some people happen to dislike me.
- _____ 20. I don't always know the reasons why I do the things I do.
- _____ 21. I sometimes tell lies if I have to.
- _____ 22. I never cover up my mistakes.
- _____ 23. There have been occasions when I have taken advantage of someone.
- _____ 24. I never swear.
- _____ 25. I sometimes try to get even rather than forgive and forget.
- _____ 26. I always obey laws, even if I'm unlikely to get caught.
- _____ 27. I have said something bad about a friend behind his or her back.
- _____ 28. When I hear people talking privately, I avoid listening to them.
- _____ 29. I have received too much change from a salesperson without telling him or her.
- _____ 30. I always declare everything at customs.
- _____ 31. When I was young I sometimes stole things.
- _____ 32. I have never dropped litter on the street.
- _____ 33. I sometimes drive faster than the speed limit.
- _____ 34. I never read sexy books or magazines.
- _____ 35. I have done things that I don't tell other people about.
- _____ 36. I never take things that don't belong to me.
- _____ 37. I have taken sick-leave from work or school even though I wasn't really sick.
- _____ 38. I have never damaged a library book or store merchandise without reporting it.
- _____ 39. I have some pretty awful habits.
- _____ 40. I don't gossip about other people's business.

Appendix D

The PANAS

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you GENERALLY feel this way, that is how you feel on the average. Use the following scale to record your answers.

Very Slightly or Not at All 1	A Little 2	Moderately 3	Quite a Bit 4	Extremely 5
_____	Interested	_____	Irritable	
_____	Distressed	_____	Alert	
_____	Excited	_____	Ashamed	
_____	Upset	_____	Inspired	
_____	Strong	_____	Nervous	
_____	Guilty	_____	Determined	
_____	Scared	_____	Attentive	
_____	Hostile	_____	Jittery	
_____	Enthusiastic	_____	Active	
_____	Proud	_____	Afraid	

Table 1.1

Descriptive Statistics for Cattell's 16 Personality Factors Sten Scores

Factor	Mean	Std. Deviation
A (Warmth)	4.68	1.74
B (Reasoning)	5.94	1.57
C (Emotional Stability)	5.77	1.52
E (Dominance)	4.97	1.47
F (Liveliness)	5.00	1.51
G (Rule-Consciousness)	5.48	1.50
H (Social Boldness)	5.32	2.15
I (Sensitivity)	3.90	1.30
L (Vigilance)	5.97	1.38
M (Abstractedness)	4.94	1.44
N (Privateness)	5.77	1.78
O (Apprehension)	5.39	1.54
Q1 (Openness to Change)	4.90	1.11
Q2 (Self-Reliance)	6.10	1.80
Q3 (Perfectionism)	5.65	1.68
Q4 (Tension)	5.58	1.50
Impression Mgmt Raw	46.07	27.14
Infrequency Raw	72.84	17.17

Acquiescence Raw	36.65	30.51
Extraversion	48.07	17.17
Anxiety	54.68	15.85
Tough-Mindedness	69.81	13.19
Independence	50.42	13.87
Self-Control	57.71	11.91
Realistic	68.65	12.80
Investigative	66.81	13.82
Artistic	41.45	14.47
Social	45.68	16.41
Enterprising	52.84	13.42
Conventional	65.87	12.65
Self-Esteem	53.84	14.86
Emotional Adjustment	55.97	14.56
Social Adjustment	48.90	19.85
Emotional Expressivity	49.55	21.99
Emotional Sensitivity	44.07	15.01
Emotional Control	58.81	15.63
Social Expressivity	48.81	19.68
Social Sensitivity	52.13	16.66
Social Control	50.00	18.66
Empathy	47.81	14.03
Leadership Potential	55.58	16.56

Creative Potential	47.55	18.25
Creative Achievement	50.81	12.41

Table 1.2

Frequency Data for Factor A (Warmth)

Score	Frequency	Percent
1.0	1	3.2
2.0	2	6.5
3.0	4	12.9
4.0	9	29.0
5.0	5	16.1
6.0	5	16.1
7.0	3	9.7
8.0	2	6.5

Table 1.3

Frequency Data for Factor B (Reasoning)

Score	Frequency	Percent
2.0	1	3.2
3.0	2	6.5
4.0	1	3.2
5.0	6	19.4
6.0	11	35.5
7.0	5	16.1
8.0	4	12.9
9.0	1	3.2

Table 1.4

Frequency Data for Factor C (Emotional Stability)

Score	Frequency	Percent
2.0	1	3.2
3.0	1	3.2
4.0	2	6.5
5.0	12	38.7
6.0	4	12.9
7.0	6	19.4
8.0	5	16.1

Table 1.5

Frequency Data for Factor E (Dominance)

Score	Frequency	Percent
2.0	2	6.5
3.0	1	3.2
4.0	9	29.0
5.0	9	29.0
6.0	6	19.4
7.0	3	9.7
9.0	1	3.2

Table 1.6

Frequency Data for Factor F (Liveliness)

Score	Frequency	Percent
2.0	2	6.5
3.0	3	9.7
4.0	5	16.1
5.0	9	29.0
6.0	9	29.0
7.0	2	6.5
9.0	1	3.2

Table 1.7

Frequency Data for Factor G (Rule-Consciousness)

Score	Frequency	Percent
2.0	2	6.5
3.0	1	3.2
4.0	2	6.5
5.0	10	32.3
6.0	10	32.3
7.0	4	12.9
8.0	1	3.2
9.0	1	3.2

Table 1.8

Frequency Data for Factor H (Social Boldness)

Score	Frequency	Percent
2.0	3	9.7
3.0	2	6.5
4.0	7	22.6
5.0	8	25.8
6.0	3	9.7
7.0	2	6.5
8.0	1	3.2
9.0	5	16.1

Table 1.9

Frequency Data for Factor I (Sensitivity)

Score	Frequency	Percent
1.0	1	3.2
2.0	2	6.5
3.0	10	32.3
4.0	8	25.8
5.0	7	22.6
6.0	2	6.5
7.0	1	3.2

Table 1.10

Frequency Data for Factor L (Vigilance)

Score	Frequency	Percent
3.0	1	3.2
4.0	2	6.5
5.0	9	29.0
6.0	10	32.3
7.0	5	16.1
8.0	2	6.5
9.0	2	6.5

Table 1.11

Frequency Data for Factor M (Abstractedness)

Score	Frequency	Percent
2.0	3	9.7
3.0	1	3.2
4.0	6	19.4
5.0	10	32.3
6.0	8	25.8
7.0	2	6.5
8.0	1	3.2

Table 1.12

Frequency Data for Factor N (Privateness)

Score	Frequency	Percent
2.0	2	6.5
3.0	1	3.2
4.0	4	12.9
5.0	6	19.4
6.0	7	22.6
7.0	5	16.1
8.0	5	16.1
9.0	1	3.2

Table 1.13

Frequency Data for Factor O (Apprehension)

Score	Frequency	Percent
3.0	2	6.5
4.0	9	29.0
5.0	6	19.4
6.0	8	25.8
7.0	2	6.5
8.0	3	9.7
9.0	1	3.2

Table 1.14

Frequency Data for Factor Q1 (Openness to Change)

Score	Frequency	Percent
3.0	2	6.5
4.0	10	32.3
5.0	12	38.7
6.0	3	9.7
7.0	4	12.9

Table 1.15

Frequency Data for Factor Q2 (Self-Reliance)

Score	Frequency	Percent
2.0	2	6.5
4.0	1	3.2
5.0	8	25.8
6.0	10	32.3
7.0	3	9.7
8.0	4	12.9
9.0	2	6.5
10.0	1	3.2

Table 1.16

Frequency Data for Factor Q3 (Perfectionism)

Score	Frequency	Percent
1.0	1	3.2
2.0	1	3.2
3.0	1	3.2
4.0	1	3.2
5.0	9	29.0
6.0	11	35.5
7.0	4	12.9
8.0	1	3.2
9.0	2	6.5

Table 1.17

Frequency Data for Factor Q4 (Tension)

Score	Frequency	Percent
2.0	1	3.2
3.0	2	6.5
4.0	3	9.7
5.0	8	25.8
6.0	9	29.0
7.0	6	19.4
8.0	1	3.2
9.0	1	3.2

Table 1.18

Frequency Data for Global Factor - Extraversion

Score	Frequency	Percent
13.0	1	3.2
19.0	1	3.2
23.0	1	3.2
28.0	1	3.2
30.0	1	3.2
33.0	2	6.5
37.0	1	3.2
39.0	1	3.2
40.0	2	6.5
42.0	1	3.2
44.0	1	3.2
45.0	1	3.2
46.0	1	3.2
49.0	1	3.2
51.0	2	6.5
54.0	2	6.5
55.0	1	3.2
56.0	1	3.2

59.0	3	9.7
62.0	1	3.2
63.0	1	3.2
68.0	1	3.2
71.0	1	3.2
75.0	1	3.2
92.0	1	3.2

Table 1.19

Frequency Data for Global Factor - Anxiety

Score	Frequency	Percent
25.0	1	3.2
27.0	1	3.2
35.0	1	3.2
38.0	1	3.2
39.0	1	3.2
40.0	1	3.2
43.0	1	3.2
44.0	1	3.2
46.0	1	3.2
49.0	2	6.5
50.0	1	3.2
51.0	4	12.9
54.0	1	3.2
55.0	1	3.2
57.0	1	3.2
58.0	1	3.2
59.0	1	3.2
62.0	1	3.2

63.0	1	3.2
66.0	3	9.7
70.0	1	3.2
72.0	1	3.2
73.0	1	3.2
89.0	1	3.2
96.0	1	3.2

Table 1.20

Frequency Data for Global Factor – Tough-Mindedness

Score	Frequency	Percent
45.0	1	3.2
46.0	1	3.2
48.0	1	3.2
51.0	1	3.2
55.0	1	3.2
58.0	1	3.2
59.0	1	3.2
60.0	1	3.2
63.0	1	3.2
65.0	3	9.7
67.0	1	3.2
69.0	1	3.2
70.0	3	9.7
71.0	1	3.2
72.0	1	3.2
73.0	1	3.2
75.0	1	3.2
77.0	1	3.2

78.0	1	3.2
80.0	1	3.2
82.0	1	3.2
85.0	1	3.2
86.0	1	3.2
87.0	1	3.2
89.0	1	3.2
91.0	1	3.2
92.0	1	3.2

Table 1.21

Frequency Data for Global Factor – Independence

Score	Frequency	Percent
21.0	1	3.2
23.0	1	3.2
34.0	1	3.2
35.0	1	3.2
36.0	1	3.2
38.0	1	3.2
39.0	1	3.2
41.0	1	3.2
44.0	3	9.7
45.0	1	3.2
48.0	1	3.2
51.0	4	12.9
52.0	1	3.2
54.0	1	3.2
55.0	1	3.2
56.0	3	9.7
58.0	1	3.2
60.0	1	3.2

62.0	2	6.5
67.0	1	3.2
73.0	1	3.2
83.0	1	3.2

Table 1.22

Frequency Data for Global Factor – Self-Control

Score	Frequency	Percent
33.0	1	3.2
35.0	1	3.2
44.0	1	3.2
45.0	1	3.2
46.0	3	9.7
47.0	1	3.2
48.0	1	3.2
51.0	1	3.2
54.0	1	3.2
55.0	1	3.2
56.0	1	3.2
57.0	1	3.2
58.0	3	9.7
61.0	3	9.7
62.0	1	3.2
64.0	2	6.5
65.0	1	3.2
67.0	2	6.5

72.0	2	6.5
76.0	1	3.2
80.0	2	6.5

Table 2.1

Descriptive Statistics for Job Descriptive Index with Job in General

Scale	Mean	Std. Deviation
Work on Present Job	42.97	11.25
Pay	21.45	4.39
Opportunities for Promotion	13.10	7.81
Supervision	20.10	15.31
Co-workers	38.46	10.09
Job in General	45.07	12.47

Table 2.2

Frequency Data for Job Descriptive Index Facet – Work on Present Job

Statement No.	“Y”Freq./Percent	“?”Freq./Percent	“N”Freq./Percent
1 (Fascinating)	22/71.0	3/9.7	4/12.9
2 (Routine)	12/38.7	1/3.2	16/51.6
3 (Satisfying)	27/87.1	n/a	2/6.5
4 (Boring)	17/54.8	3/9.7	9/29.0
5 (Good)	27/87.1	n/a	2/6.5
6 (Accomplishment)	27/87.1	n/a	2/6.5
7 (Respected)	27/87.1	1/3.2	1/3.2
8 (Uncomfortable)	25/80.6	2/6.5	2/6.5
9 (Pleasant)	21/67.7	4/12.9	4/12.9
10 (Useful)	28/90.3	n/a	1/3.2
11 (Challenging)	26/83.9	n/a	3/9.7
12 (Simple)	22/71.0	2/6.5	5/16.1
13 (Repetitive)	13/41.9	1/3.2	15/48.4
14 (Creative)	20/64.5	n/a	9/29.0
15 (Dull)	21/67.7	1/3.2	7/22.6
16 (Uninteresting)	25/80.6	2/6.5	2/6.5
17 (See Results)	23/74.2	1/3.2	5/16.1
18 (Uses Abilities)	24/77.4	1/3.2	4/12.9

Table 2.3

Frequency Data for Job Descriptive Index Facet – Pay

Statement No.	“Y” Freq./Percent	“?” Freq./Percent	“N” Freq./Percent
19 (Adequate Income)	28/90.3	n/a	1/3.2
20 (Fair)	25/80.6	n/a	4/12.9
21 (Barely Livable)	28/90.3	1/3.2	n/a
22 (Bad)	28/90.3	1/3.2	n/a
23 (Afford Luxuries)	13/41.9	5/16.1	11/35.5
24 (Less than Deserve)	17/54.8	6/19.4	6/19.4
25 (Well Paid)	16/51.6	3/9.7	10/32.3
26 (Insecure)	27/87.1	1/3.2	1/3.2
27 (Underpaid)	18/58.1	5/16.1	6/19.4

Table 2.4

Frequency Data for Job Descriptive Index Facet – Opportunities for Promotion

Statement No.	“Y” Freq./Percent	“?” Freq./Percent	“N” Freq./Percent
28 (Promotions)	12/38.7	4/12.9	13/41.9
29 (Limited Opportunity)	6/19.4	2/6.5	21/67.7
30 (Based on Ability)	11/35.5	3/9.7	15/48.4
31 (Dead End Job)	24/77.4	1/3.2	4/12.9
32 (Good Chance)	12/38.7	5/16.1	12/38.7
33 (Unfair Policy)	13/41.9	7/22.6	9/29.0
34 (Infrequent)	11/35.5	1/3.2	17/54.8
35 (Regular)	12/38.7	2/6.5	15/48.4
36 (Fairly Good Chance)	16/51.6	4/12.9	9/29.0

Table 2.5

Frequency Data for Job Descriptive Index Facet – Supervisors

Statement No.	“Y” Freq./Percent	“?” Freq./Percent	“N” Freq./Percent
37 (Ask my Advice)	11/35.5	1/3.2	17/54.8
38 (Hard to Please)	17/54.8	3/9.7	9/29.0
39 (Impolite)	15/48.4	4/12.9	10/32.3
40 (Praises Work)	11/35.5	2/6.5	16/51.6
41 (Tactiful)	7/22.6	5/16.1	17/54.8
42 (Influential)	7/22.6	2/6.5	20/64.5
43 (Up to Date)	6/19.4	2/6.5	21/67.7
44 (Doesn't Enough)	12/38.7	5/16.1	12/38.7
45 (Has Favorites)	5/16.1	2/6.5	22/71.0
46 (Tells me)	8/25.8	1/3.2	20/64.5
47 (Annoying)	10/32.3	5/16.1	14/45.2
48 (Stubborn)	5/16.1	1/3.2	23/74.2
49 (Knows Job)	8/25.8	2/6.5	19/61.3
50 (Bad)	11/35.5	7/22.6	11/35.5
51 (Intelligent)	10/32.3	5/16.1	14/45.2
52 (Poor Planner)	6/19.4	2/6.5	21/67.7
53 (Around if Needed)	11/35.5	3/9.7	15/48.4
54 (Lazy)	15/48.4	6/19.4	8/25.8

Table 2.6

Frequency Data for Job Descriptive Index Facet – Co-workers

Statement No.	“Y” Freq./Percent	“?” Freq./Percent	“N” Freq./Percent
55 (Stimulating)	20/64.5	1/3.2	7/22.6
56 (Boring)	25/80.6	1/3.2	2/6.5
57 (Slow)	23/74.2	3/9.7	2/6.5
58 (Helpful)	25/80.6	1/3.2	2/6.5
59 (Stupid)	25/80.6	1/3.2	2/6.5
60 (Responsible)	24/77.4	2/6.5	2/6.5
61 (Fast)	7/22.6	12/38.7	9/29.0
62 (Intelligent)	27/87.1	1/3.2	n/a
63 (Makes Enemies)	17/54.8	4/12.9	7/22.6
64 (Talks too Much)	15/48.4	3/9.7	10/32.3
65 (Smart)	24/77.4	2/6.5	2/6.5
66 (Lazy)	19/61.3	3/9.7	6/19.4
67 (Unpleasant)	23/74.2	1/3.2	4/12.9
68 (Gossipy)	6/19.4	2/6.5	20/64.5
69 (Active)	20/64.5	5/16.1	3/9.7
70 (Narrow Interests)	17/54.8	1/3.2	10/32.3
71 (Loyal)	18/58.1	4/12.9	6/19.4
72 (Stubborn)	8/25.8	1/3.2	19/61.3

Table 2.7

Frequency Data for Job Descriptive Index Facet – Job in General

Statement No.	“Y”Freq./Percent	“?”Freq./Percent	“N”Freq./Percent
73 (Pleasant)	26/83.9	n/a	2/6.5
74 (Bad)	26/83.9	1/3.2	1/3.2
75 (Ideal)	14/45.2	n/a	14/45.2
76 (Waste of Time)	25/80.6	1/3.2	2/6.5
77 (Good)	25/80.6	2/6.5	1/3.2
78 (Undesirable)	26/83.9	1/3.2	1/3.2
79 (Worthwhile)	26/83.9	n/a	2/6.5
80 (Worse than Most)	25/80.6	2/6.5	1/3.2
81 (Acceptable)	26/83.9	1/3.2	1/3.2
82 (Superior)	15/48.4	2/6.5	11/35.5
83 (Better than Most)	23/74.2	4/12.9	1/3.2
84 (Disagreeable)	24/77.4	3/9.7	1/3.2
85 (Makes me Content)	19/61.3	3/9.7	6/19.4
86 (Inadequate)	22/71.0	1/3.2	5/16.1
87 (Excellent)	14/45.2	2/6.5	12/38.7
88 (Rotten)	26/83.9	2/6.5	n/a
89 (Enjoyable)	24/77.4	1/3.2	3/9.7
90 (Poor)	26/83.9	n/a	2/6.5

Table 3.1

Descriptive Statistics for Balanced Inventory of Desirable Responding

Statement	Mean	Std. Deviation
1	5.10	1.16
2	4.16	1.57
3	3.58	1.63
4	5.13	1.31
5	3.97	1.64
6	3.90	1.47
7	3.29	1.49
8	5.16	1.70
9	4.35	1.84
10	4.13	1.77
11	3.39	1.36
12	5.06	1.41
13	5.48	1.67
14	5.61	1.20
15	5.06	1.39
16	4.48	1.46
17	5.71	.74
18	5.45	1.26

19	4.97	1.40
20	4.97	1.38
21	5.68	1.11
22	3.90	2.01
23	4.71	1.72
24	2.10	1.72
25	4.68	1.47
26	4.55	1.77
27	3.55	1.69
28	4.48	1.63
29	4.37	2.11
30	5.63	2.13
31	4.48	2.31
32	2.87	2.19
33	2.13	1.50
34	3.23	2.11
35	2.77	1.89
36	5.81	1.70
37	4.94	2.08
38	5.23	2.00
39	5.19	1.49
40	4.13	1.65

Table 3.2

Descriptive Statistics for Balanced Inventory of Desirable Responding – Self Deception and Impression Management

Scale	Mean	Std. Deviation
Self-Deception	92.77	10.14
Impression Management	83.45	15.15

Table 4.1

Descriptive Statistics for the Positive and Negative Affectivity Scale

Statement	Mean	Std. Deviation
1 (Interested)	3.90	.47
2 (Distressed)	1.84	.82
3 (Excited)	3.13	.85
4 (Upset)	2.00	.82
5 (Strong)	3.77	.84
6 (Guilty)	1.45	.68
7 (Scared)	1.29	.53
8 (Hostile)	1.52	.77
9 (Enthusiastic)	3.65	.91
10 (Proud)	3.97	1.14
11 (Irritable)	2.16	.82
12 (Alert)	4.00	.63
13 (Ashamed)	1.26	.51
14 (Inspired)	3.16	.97
15 (Nervous)	1.81	.83
16 (Determined)	3.90	.87
17 (Attentive)	3.68	.83
18 (Jittery)	1.55	.68

19 (Active)	4.00	.86
20 (Afraid)	1.39	.67

Table 4.2

Descriptive Statistics for the Positive and Negative Affectivity Scale – Positive Affectivity and Negative Affectivity

Scale	Mean	Std. Deviation
Positive Affectivity	37.16	6.16
Negative Affectivity	16.26	5.18

Table 5.1

Descriptive Statistics for the Current Performance Evaluation

Area/Skill	Mean	Std. Deviation
EMS Situations	7.46	.853
EMS Skills/Equip.	7.60	1.109
Oral/Written Expression	7.16	.850
Initiative	5.52	1.132
Ability to Learn	7.10	.816
Self-Improvement	6.22	1.292
Dependability	5.88	.992
Cooperation and Teamwork	7.64	.550
Follow Instructions	6.76	.436
Skill w/Firefighter Tools	7.76	.580
Relationship w/employees	6.96	.706
Fireground Situation Appraisal	6.44	.441
Accept Responsibility	7.02	.568
Quantity of Work	6.86	.700
Quality of Work	7.64	.396
Leadership	6.36	.729
Performance in Training	6.78	.647
Safety	6.74	.631

Appearance	6.16	.863
Appear before Public	6.80	.764
Total	140.06	19.828

Table 5.1

Correlation Between Personality, Job Satisfaction, and Performance

	EX	AX	TM	IN	SC	SD	IM	PA	NA	JIG
AX	-.233									
TM	-.253	-.172								
IN	.556**	.191	-.183							
SC	-.238	-.119	.279	.521**						
SD	.000	-.244	.129	.102	.170					
IM	.057	-.376*	.142	-.404*	.599**	.112				
PA	.157	-.416*	.173	.204	.182	.482**	.004			
NA	-.094	.694**	-.105	.128	.005	-.202	-.159	-.388*		
JIG	-.079	-.208	-.020	-.399*	.326	.146	.487**	.170	-.252	
EV	.055	-.174	.386	.189	-.245	-.141	-.026	.477*	-.220	.307

* = Significance at .05 level
 ** = Significance at .01 level

- EX = Extraversion
- AX = Anxiety
- TM = Tough-Mindedness
- IN = Independence
- SC = Self-Control
- SD = Self-Deception
- IM = Impression Management
- PA = Positive Affectivity
- NA = Negative Affectivity
- JIG = Job in General
- EV = Evaluation Score

Figure Captions

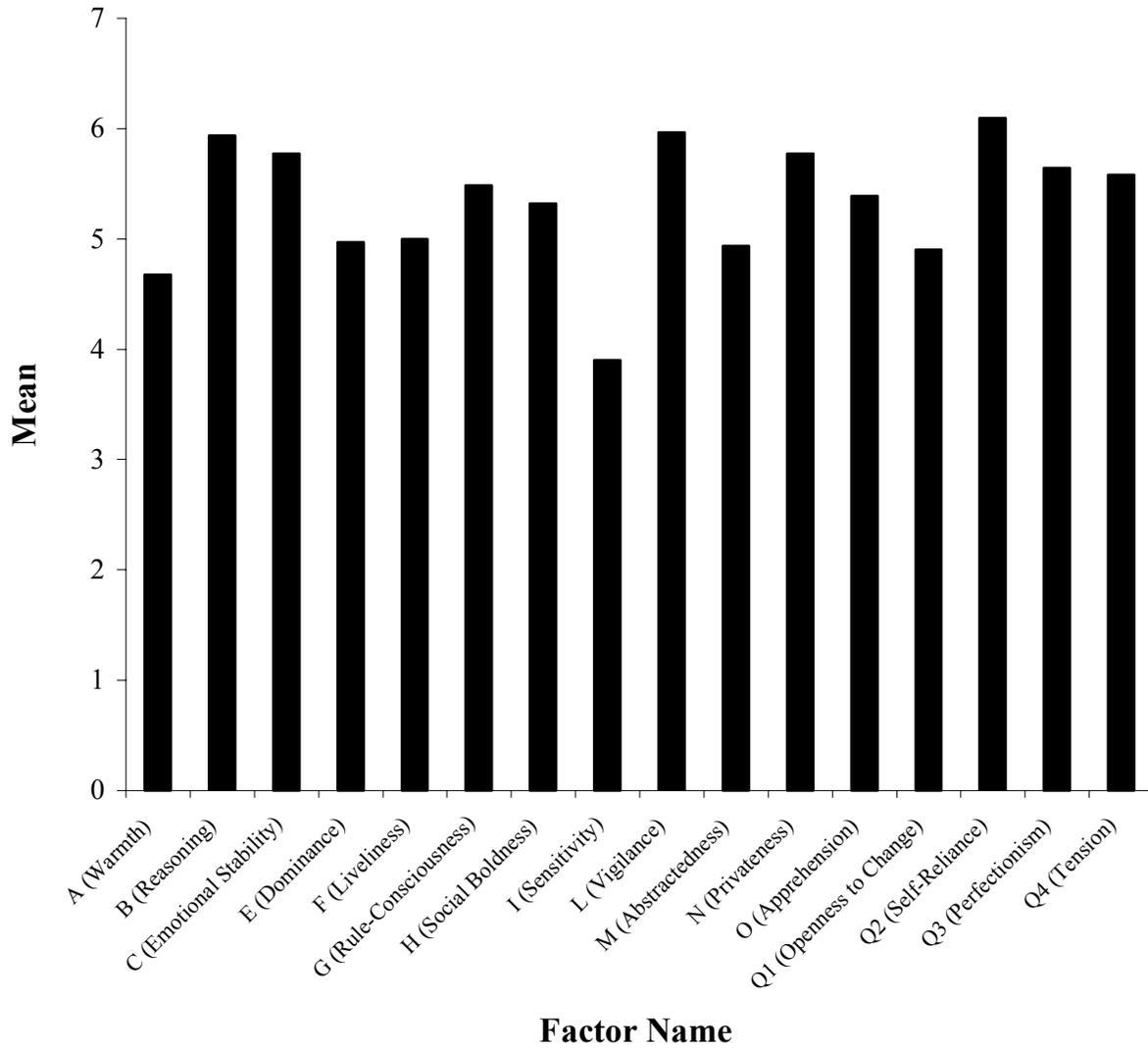
Figure 1: Mean sten scores for Cattell's 16PF – Primary Scales

Figure 2: Mean sten scores for Cattell's 16 PF – Global Scales

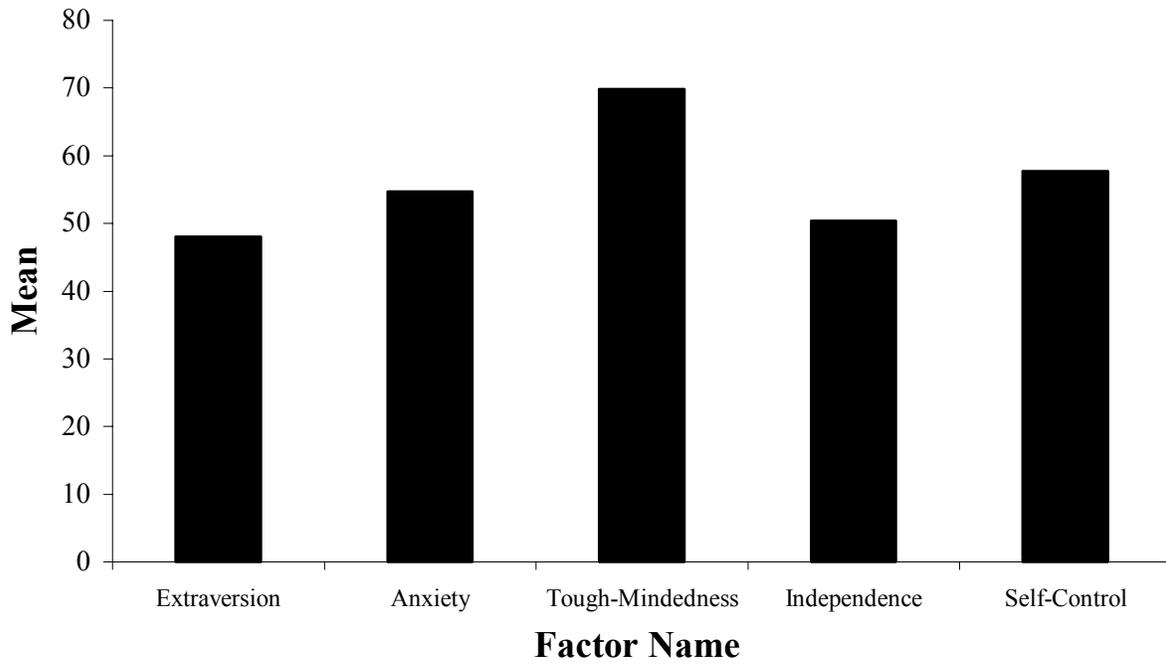
Figure 3: Mean of Job Descriptive Index with Job in General

Figure 4: Mean of Current Performance Evaluation

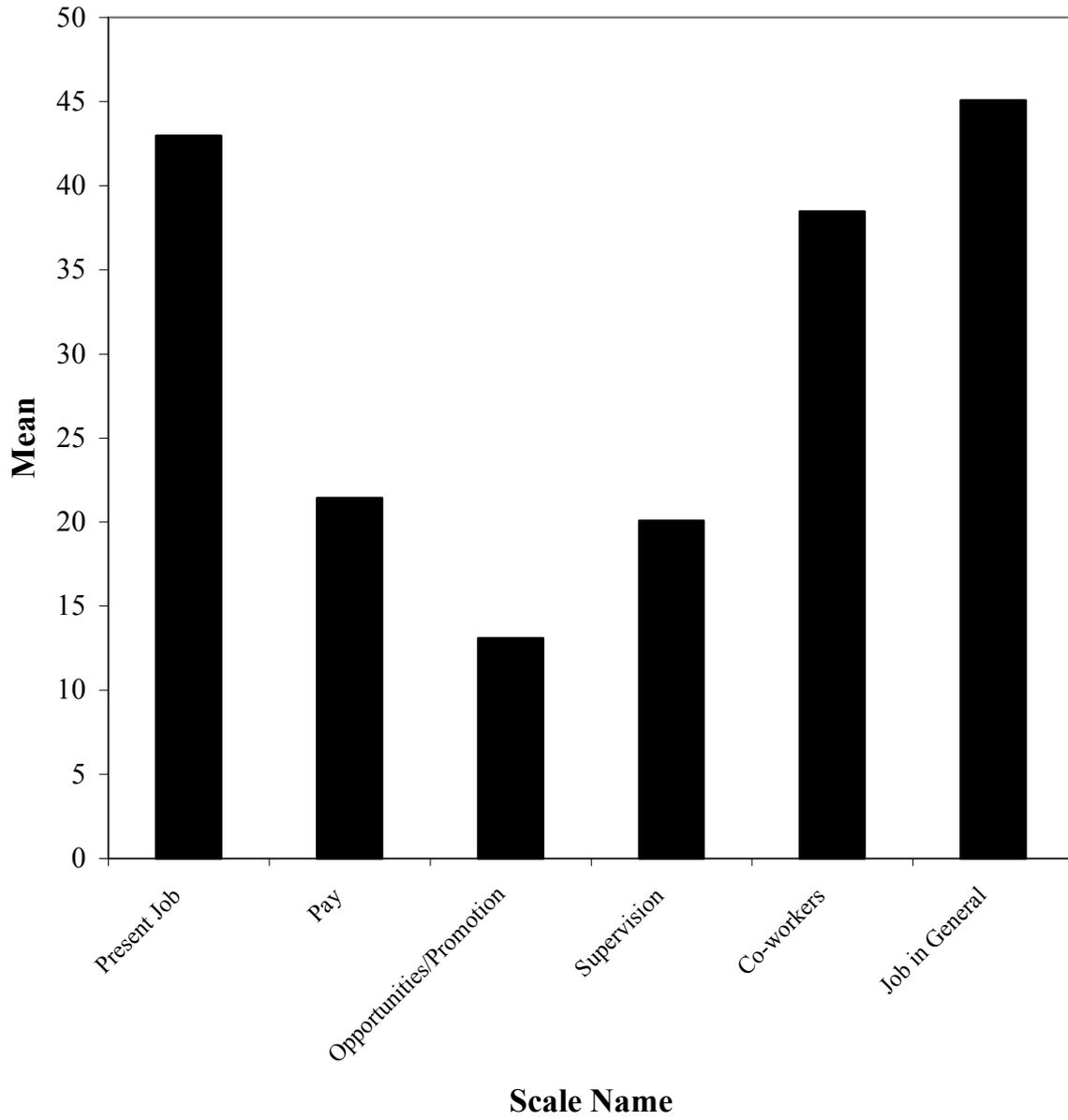
16 PF Primary Sten Score Means



16 PF Global Scale Sten Scores



Job Descriptive Index Mean Scale Scores



Current Performance Evaluation Means

